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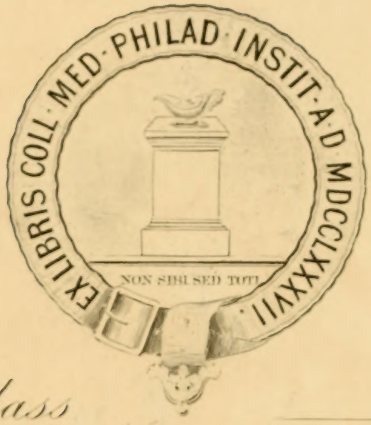

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Original Articles.

IMPULSIVE INSANITY.*

BY HON. W. H. H. RUSSELL, B. L.

When criminals have been tried for, and convicted of, deliberate and willful murder, and the final sentence of death has been pronounced, the execution of the death penalty should be such that the State and Medical Science would thereby receive the greatest benefit possible from the death of the culprit. In other words, the condemned person, having forfeited his or her life to the State, should on the day fixed for the execution be given over to a Medical Commission, established by law that they might devise the easiest mode of death known to medical science, and that vivisection might be had to the greatest advantage possible to physiological, pathological and medical science.

Sir William Hamilton, one of the most profound and eminent authors in the domain of medical science, and well known in English literature, appropriated as his favorite maxim this significant aphorism: "In the universe there is nothing great but *Man;* in man there is nothing great but *Mind.*" In the light and reflex of such a profound and comprehensive sentiment, it may seem somewhat presumptuous for an ordinary mortal to assume the privilege of entertaining and interesting learned doctors and lawyers upon the complex medico-legal question, Impulsive Insanity, and yet when I received the invitation of your committee to read and submit a paper for the consideration and discussion of your members, the mysterious telephone of thought, whispering from the phonographic impress of memory, of scenes, and incidents, of meetings, and occasions of this Society in days gone bye (when it was my privilege and honor as an active member to participate in your proceedings), suggested to my mind that perhaps the most appropriate theme to select for dissertation would be a serio-medico-legal phase of non-mental equilibrium, not that any member of this Society has ever been shadowed by the dark taint of mental complaint, but that the great city of New York, as a community at large, affords one of the finest fields for the observation and study of the nervo-impulsive tendencies of our rapid American life. In other words, as New York is to a great extent the reflex of the commercial and financial growth and enterprise of our great country at large, so Manhattan Island, to the square inch, presents more varying types of humanity and mental pulsations than any other city in the world. And if we pause for a moment and contemplate the embryological conceptions of this wonderful metropolis when Hendrick Hudson cast the foreign anchor of his sailing craft (Half Moon) in the peaceful waters of the then primitive harbor of the New World, we may to a certain extent catch the reflex of advancing civilization, and realize a contrast with my effort here to-night. If, however, the windward forecast of a few anchoring thoughts finds enlodgment in your fertile brains, which the genius of Liberty may germinate into advancing efforts and novel realizations of medico-legal jurisprudence, in the domain of enlightened progress, then I shall be content to subside with supreme satisfaction.

Professor Elwell, in his excellent work upon Medical Jurisprudence (3d ed., 338), well observes: "Insanity stands at the head of medico-legal questions, in its relations to criminal and civil jurisprudence. The difficulties that surround its study seem to be insurmountable. Countless volumes having been written by the ablest minds of the medical profession upon the great question;

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quarterly and monthly periodicals having been established expressly for its discussion and elucidation; some of the ablest thinkers in medicine having made it for a lifetime a specialty; the patronage and support of governments having been freely given to aid its unfortunate victims and those who take care of them, the popular mind and general reader have come very naturally to conclude that the whole subject is well understood, or at least that very much must be well settled and satisfactorily established, so that when the usually calm and transparent mental ocean world becomes turbulent and tumultuous from the action of the storms that sometimes sweep across its surface, it may still be safely navigated—each sunken rock and shallow bottom detected, aided and guided by the beacon lights thus established upon the headline.

"With this general impression prevalent, it may be humiliating to the pathological and psychological student or scholar to admit that, notwithstanding all that has been accomplished by the accumulation, enunciation and discussion of theories upon the subject of insanity, especially during the last century, the whole question is *sub judice*."

Dr. Ray, one of the leading standard authorities, writes: "These pathological changes are not sufficiently definite to admit of classification, or of practical application in the various kinds of insanity."

Dr. Forbes Winslow, one of the ablest writers upon the subject, and the editor of the Physiological Journal, London, states in print that he has "examined no less than ten thousand cases of insanity, reported by different authors, with a view to ascertain if there was physical disease as a basis of the trouble," and the result is perfectly satisfactory to him of the material cause of mental derangement, and yet he says: "I do not maintain that I am in a position to describe the peculiar and specific alteration which some allege to be the origin of that derangement of the action of thought to which we apply the term insanity. Admitting such a discovery to be beyond the range of finite intelligence, it does not in the slightest degree militate against the material view just propounded."

Sir Benjamin Brodie, Bart., D. C. L., the eminent surgeon, psychologist and physiologist, says: "I entirely agree with you in the opinion that we must admit the existence of a Deity as a fact as well established as that of the law of gravitation, and that in doing so we must further admit that mind may and does exist independently of bodily organization. Be it also admitted that mind, in its humblest form, is still mind, and that immeasurable as the distance between them may be, it must, nevertheless, be regarded as being of the same essence as that of Deity."

Profound thinkers and writers, learned and eminent jurists and physicians differ honestly in many cases, and it is sometimes almost impossible to draw the line between the eccentricities of genius and what might pathologically be termed a diseased mind. It is rare that the theory of insanity is advanced in a civil or criminal case, without foundation in fact, and it seldom occurs that injustice is done by reason of the interposition of such a plea. This proposition is well illustrated in the somewhat famous case and trial of Charles B. Huntington, the noted Wall street forger, who carried on a banker's and broker's business for several years in Wall street, to the extent of millions of dollars, dealing with some of the sharpest financiers in the world, using forged drafts and checks. Moral insanity was erroneously interposed in his behalf as a defense against the repeated crime of forgery. Drs. Parker and Gilman, who were then known and recognized as able physicians, physiologists and metaphysicians, were called as experts on the part of the defense. They accepted the theory of Ray, to wit, that insanity always depends upon diseased physical organization, but when asked upon cross-examination, they were entirely unable to state or show where the physical derangement existed.

Huntington was convicted, and ought to have been, because he was not morally or otherwise insane: it was a clear case of simulated insanity, and the experts when pushed to the point seemed to be at a loss to determine what was the matter, or else they had not thoroughly studied the case in all its phases. No physician or expert, however great his experience or learning, should consent to go upon the witness stand and testify

as an expert unless he is thoroughly familiar with the entire history of the accused (or afflicted) and prepared from a careful study of the case to meet and answer any and every question that may be propounded to him by learned and technical counsel. Huntington was not morally insane, and if his mind was at all diseased the malady was of that impulsive type arising from an irresistible inspiration or impulse to chance it, and speculate on margins, and even with forged papers.

The stock and produce Exchanges of this great moneyed center of the Republic are sore breeders of impulsive tendencies, and it is not an unusual thing to see men who are accustomed to be daily in those resorts, as they go down town on the elevated cars, matching pennies upon the rise and fall of the market during the day; and the "bull" and "bear" days in the *pits* of those great marts of marginal traffic and speculation are very good illustrations, to the careful observer from the galleries, of the daze and craze of Wall Street life and speculation. The financial reporter of one of the leading New York dailies, who for the past ten years has mingled every day more or less with the active men who continuously watch the tickers, the boards, and the showing of hands in the "bull" and "bear" pens, said that the familiar faces are rarely seen for more than eight consecutive years on the floors of the Exchanges. It is marvelous that more men are not crazed and distracted by the impulsive spirit of chance and speculation growing out of marginal dealings, and yet it is very seldom that we know or read of a genuine case of insanity arising solely from such causes.

By Impulsive Insanity we mean that form of mental ailment which renders the person irresponsible under the law for the act complained of; that is, that at the time of the commission of the act the person was physically controlled by an irresistible impulse to do something, which impulse so overcame the mental faculties and powers that the will power, memory, reason and judgment were for the time being dethroned, and the person could not comprehend the nature of the act, as the reflective faculties of the mind were mostly involved. This type of insanity is not generally known or classified among the authors and experts, and yet it has been passed upon by the highest tribunals of justice in Europe and America, and most frequently in life insurance cases, wherein the insurance companies have sought to avoid liability under the policy upon the ground of the suicide of the person insured. It surely must be of interest for the great professions to know how the most eminent jurists of both continents have regarded the different phases and types of insanity. A few leading cases must suffice the purpose of this paper upon the subject now under consideration.

In the Supreme Court of the United States Mr. Justice Hunt, in an elaborate opinion rendered in the life insurance case of Terry (15 Wallace Report, p. 583), wherein the Company sought to avoid the policy upon the theory of suicide of the assured (the contract of assurance containing this clause: "If the said person whose life is hereby insured . . . . shall die by his own hand . . . . this policy shall be null and void") said: "It may not be amiss to notice that the case does not present the point of what is called emotional insanity or mania transitoria, that is, the case of one in the possession of his ordinary reasoning faculties, who allows his passion to convert him into a transitory maniac, and while in this condition commits the act in question.

The trial Court in the Terry case charged the Jury as follows: "It being agreed that the deceased destroyed his life by taking poison, it is claimed by the defendant that he 'died by his own hand' within the meaning of the policy, and that they are, therefore, not liable. This is so far true that it devolves on the plaintiff to prove such insanity on the part of deceased, existing at the time he took the poison, as will relieve the act of taking his own life from the effect, which, by the general terms used in the policy, self-destruction was to have, namely, to render the policy void. It is not every kind or degree of insanity which will so far excuse the party taking his own life as to make the company insuring liable. To do this, the act of self-destruction must have been the consequence of the insanity, and the mind of the decedent must have been so far deranged as to have

made him incapable of using a rational judgment in regard to the act which he was committing. If he was impelled to the act by an insane impulse which the reason that was left him did not enable him to resist, or if his reasoning powers were so far overthrown by his mental condition that he could not exercise his reasoning faculties on the act he was about to do, the company is liable. On the other hand, there is no presumption of law, *prima facie*, or otherwise, that self-destruction arises from insanity, and if you believe from the evidence that the decedent, although excited, or angry, or distressed in mind, formed the determination to take his own life, because, in the exercise of his usual reasoning faculties, he preferred death to life, then the company is not liable, because he died by his own hand within the meaning of the policy."

The learned Justice of the Supreme Court, after citing the leading English and American cases and decisions, continued as follows: "There is a conflict in the authorities which cannot be reconciled. The propositions embodied in the charge before us are in some respects different fron each other, but in principle they are identical. They rest upon the same basis—the moral and intellectual incapacity of the deceased. In each case the physical act of self-destruction was that of George Terry. In neither was it truly his act. In the one supposition he did it when his reasoning powers were overthrown and he had not power or capacity to exercise them upon the act he was about to do. It was in effect as if his intellect and reason were blotted out or had never existed. In the other, if he understood and appreciated the effect of his act, an uncontrollable impulse caused by insanity compelled its commission. He had not the power to refrain from its commission, or to resist the impulse. Each of the principles put forth by the Judge rests upon the same basis—that the act was not the voluntary, intelligent act of the deceased.

"The causes of insanity are as varied as the varying circumstances of man.

> —Some for love, some for jealousy,
> For grim religion some, and some for pride,
> Have lost their reason; some for fear of want,
> Want all their lives; and others every day,
> For fear of dying, suffer worse than death.

"When we speak of the mental condition of a person, we refer to his senses, his perceptions, his consciousness, his ideas. If his mental condition is perfect, his will, his memory, his understanding are perfect, and connected with a healthy bodily organization. If these do not concur, his mental condition is diseased or defective. Excessive action of the brain, whereby the faculties become exhausted, or want of proper action, whereby the faculties become impaired and diminished, the visions, delusions, and mania which accompany irritability, or the weakness which results from an excess of vital functions, indigestion, and sleeplessness, are all the result of a disturbance of the physical system. The intellect and intelligence of man are manifested through the organs of the brain, and from these, consciousness, will, memory, judgment, thought, volition, and passion, the functions of the mind, do proceed. Without the brain these cannot exist. With an injured or diseased brain, these powers are impaired or diminished."

Citing Ray, Fisher and Blandford, the eminent Jurist concluded his able opinion as follows: "The question of sanity has usually been presented upon the validity of an agreement, the capacity to make a will, or upon responsibility for crime. If Terry had made an agreement under the circumstances stated in the charge, a jury or a court would have been justified in pronouncing it invalid. A will, then, made by him, would have been rejected by the surrogate if offered for probate. If upon the trial for a criminal offense, upon all the authorities, he would have been entitled to a charge that, upon proof of the facts assumed, the jury must aquit him.

"We think a similar principle must control the present case, although the standard may be different. We hold the rule on the question before us to be this: If the assured, being in the possession of his ordinary reasoning faculties, from anger, pride, jealousy, or a desire to escape from the ills of life, intentionally takes his own life, the proviso attaches, and there can be no recovery If the death is caused by the voluntary act of the assured, he knowing and intending that his death shall be the result of his act, but when his reasoning faculties are so far

impaired that he is not able to understand the moral character, the general nature, consequences, and effect of the act he is about to commit, or when he is impelled thereto by an insane impulse, which he has not the power to resist, such death is not within the contemplation of the parties to the contract, and the insurer is liable."

In the leading English case of Borrodaile *vs.* Hunter (5 Manning & Granger's, 639), the Jury found that the deceased took his own life and intended so to do, but that at the time of committing the act he was not capable of judging between right and wrong. Lord Chief Justice Erskine, in delivering the opinion of the highest court in England, said: "All that the contract requires is that the act of self-destruction should be the voluntary and wilful act of a man, having at the time sufficient powers of mind and reason to understand the physical nature and consequences of such act, and having at the time a purpose and intention to cause his own death by that act, and the question whether at the time he was capable of understanding the moral nature and quality of his purpose is not relevant to the enquiry further than as it might help to illustrate the extent of his capacity to understand the physical character of the act itself." (Mr. Chief Justice Tindel dissenting from the opinion of the Court.)

Lord Mansfield held that the legal test of a sound mind is the knowledge of right and wrong, of good and evil, of which the converse is ignorance of knowledge of right and wrong, of good and evil. The Supreme Courts of Pennsylvania and Massachusetts have followed the doctrine of the English case. In Kentucky the Supreme Court was divided in opinion. In Maine it was held that "if the insured was governed by an irresistible or blind impulse in committing the act of suicide, the plaintiff would be entitled to recover."

In New York, in the case of Brossted *vs.* Farmers' Loan and Trust Co. (4 Hill, 73) it was held that the provision in the policy had reference to a criminal act of self-destruction, that the self-destruction of the insured while insane, and incapable of discerning between right and wrong, was not within the provision, and would not vitiate the policy.

Mr. Phillips on Insurance, sec. 894, after citing many cases, concludes as follows: "And I take our law to be, that any mental derangement which would be sufficient to exonerate a party from a contract would render a person incapable of occasioning the forfeiture of a policy under this condition."*

Upon the question of criminal responsibility Ray and Fisher contend that "the true test lies in the word 'power.' Has the defendant in a criminal case the power to distinguish right from wrong, and the power to adhere to the right and wrong?"

One of the most remarkable cases on record recently occurred in Kansas City, Missouri, which for coolness, deliberation and manner of execution has no parallel in the books. After writing the following card to the public, he lit a cigar, placed it in his mouth, sat down in a chair, leaned back against the wall, and with the utmost composure took a revolver and deliberately sent a bullet through his heart. When found he was still sitting in his chair, dead, with the lighted cigar stem in his mouth.

"To whom it may concern: I, E. G. Sutton, of my own free will, do hereby take my life. No use of any questions being asked. I have tried this life and am ready to try the life to come. I have in my pocket tickets in the lotteries, as I suppose you will discover. If they draw anything, give it to my daughter. I wish you all good luck. Some people may think me full. I am—I have just eaten a hearty supper."

This case clearly shows that Sutton fully contemplated the act, and seemed to comprehend all of its phases, when he wrote: "Of my own free will, do hereby take my life. No use of any questions being asked. I have tried this life and am ready to try the life to come." He left a wife and daughter, and, although no element of family discord or financial distress apparently contributed to the act, he was willing to die even by his own hand. And, again, we have presented the poetic type described by Mr. Justice Hunt ("Some for fear of want, etc.") in the case of Salford, an assistant druggist, who,

*Most insurance companies now omit the suicide clause from the policy, or at least do not urge its force after three years.

in fear of loss of employment and poverty, persuaded his wife to consent to the death of the entire family. The wife assented, but did not wish to know when the fatal poison should be given, so when she and the youngest child retired for the night he gave them a cooling drink containing prussic acid, and in a few minutes they expired without pain. He then disposed of the other five children in the same way, and coolly sat down and wrote these words: "All in peace and without pain, thank God." He then drew up his will, went out and obtained the necessary signatures of witnesses to the document, returned, wrote four letters, then drank the fatal dose, and was soon himself a corpse.

It must be conceded that they do some phenomenal things in Chicago. On the 24th of July, 1889, Henry Munzer, a young man about 27 years of age, who was not addicted to any of the evil habits of the fast young men of that wicked city, and who had for years previous been the trusted and faithful entry-clerk for a large establishment, managing its financial affairs with wonderful success and satisfaction, appeared before Judge Gary at his own instance in proceedings of *lunatico enquirendo*, and in open Court testified as follows: "The queer sickness came on me again about a year ago, and this time I became much alarmed at the developments. I seemed to be approaching a state altogether different from the natural one. An ague-like feeling crept over me, beginning first in my brain. I was then living at my father's house on West Lake Street. My mind did not seem growing weaker, but it seemed to be altering its functions materially. Presently the sight of a tool or anything with a blade would start every fibre and nerve in me to tingling, and I became afraid of myself—afraid for my friends. I felt an impulse growing upon me to harm or kill. I knew what I was about. I recognized the faces of my friends. I had a cool control of my mental faculties. I was not out of my head in the least, but there was a desire which seemed to be muscular as well as mental, and wholly apart from my natural volitions. My father saw only the outside of this, and I dared not explain to him the complete revolution in my being. He sent me to Lake Geneva to be treated, in a private institution there, under the constant care of several experienced physicians. They have been unable to assist me. I grew worse; I knew it and realized the dread change. Never have I lost my senses. The doctors gave me chloral, but I fear that has hurt my nervous system and served to augment this fearful development rather than cure it. We consulted and thought a change would be good for me; now I insist that I be placed somewhere so that I may be watched and treated differently. The week I have been here since I left Geneva I have not been home. I will not go there. I believe that some rapid change for the worse would take place immediately, should I go back. This mania would unman me and force me to do that which I have been battling against. I would kill them. I might kill myself, and yet I would know what I was about." When told by the Judge "that will do" he seemed surprised, fell back into his chair quite exhausted, sighing as the tears trickled down his cheeks. In a moment the wrinkles disappeared from his broad, business-like forehead, the maniacal expression left his face, and rising from his seat, he was Henry Munzer again, with an intelligent, innocent face. This was undoubtedly one of the most remarkable open court illustrations of the irresistible impulse yet known in the history of jurisprudence. He was found to be insane by the Jury, and yet he began his statement of the malady by saying to the Court and Jury: "I feel something approaching heavily, but I can take care of myself here.' And after thus detailing and describing the characteristics of the impulse, he finished his evidence by saying: "I might kill myself, and yet I would know what I was about."

We read of the strange cases of Dr. Jekyll and Mr. Hyde, and of Archibald Mandelson, which are famous in the domain of fiction, and again of Seneca, the great philosopher who entered his warm bath and deliberately opened the veins in his arm that he might bleed to death. We read of Cleopatra, the proud Egyptian queen, who, while reclining upon a couch in the elegant boudoir of her palace, amid all the luxuries of oriental splendors, applied with her own hand the fatal asp to her beautiful breast, and seemed happy as it stung her life away. We cannot

say that they were insane, and yet there was the irresistible impulse to do the act. One of the most humorous instances and cases was that of the wealthy Virginia planter who annually believed that he was becoming impoverished and would be sent to the poor-house. He would cause his faithful servant to hitch up the family carriage and drive him toward the poor-house, and when the servant would say to him: "Well, Massa, you am de fust man dat I eber knowed dat dribe himse'f in his own kerridge to de poo'-house," he would immediately direct his servant to drive home. He did this annually for several years, and finally became cured of the impulse.

A well-known insurance man, thoroughly competent in his business, would, when he had taken one drink of whisky, have an irresistible and uncontrollable impulse to drink another, and repeat the same until he was thoroughly drunk. The manager of the company, who did not wish to part with his services, would, when these spells came upon him, have him go to his room, and supplied him with a gallon of whisky, from which he continuously drank until the *impulse* was entirely overcome by the stomach refusing to retain any more whisky. He would then sober up, and renew his business as if nothing of the kind had occurred, and would not again for several months taste of liquor. His father was a drinking man, and it was thought by the manager that conception occurred while the father was drunk. However strange this may seem, we believe it was a clear case of disease arising from the excessive use of liquor, and the hereditary taint was undoubtedly transmitted. The most remarkable case of transmitting features I have ever learned of was that of a German child whose father was of one branch of the German people and the mother of another. The child, as it grew up, could not speak the dialect of either its father or mother, but spoke fluently the language of a great-grandfather. Of course there was no impulse phase in that case, and it is only cited as an illustration of transmitting features.

The medical experts are often baffled by the novel and phenomenal phases of the different types of insanity that are frequently presented. As Mr. Justice Hunt well observed in his learned opinion, they are "as varied as the varying circumstances of man." So that in the diagnosis and prognosis of insanity serious mistakes are often made, and in these trying times of mental and physical impulses, with the spirit of speculation, greed of gain, and disposition to accumulate and display wealth, in our large and prosperous commercial centres, it is to be regretted that more attention and study are not given by great physicians and jurists to this branch of medical jurisprudence. When Mr. Chief Justice Coleridge visited this country in 1884, he told the lawyers of the United States, at the reception and banquet tendered him by the Bar of New York, that one of the most dangerous tendencies which he had observed among the active business and professional men of America was the apparent restless energies of active men in the great commercial centres, and that in traveling through the country he had observed the overtaxed energies of most business men with whom he had come in contact, which in his opinion must sooner or later react upon the physical and mental manhood of our nation. One of our most humorous and far-famed writers well expressed the situation when he said to a friend: "The average American is a big interrogation point."

Man, the thinker, is one thing, but man, the economic thinker and worker, is quite another being. The flashes of genius and thought, that radiate our intellectual horizon across the continent from ocean to ocean, are bright and wonderful, but in many respects they are not healthy and enduring. We have not the solid thought of other and better days of the Republic. In this fast age men think quickly but not deeply, profound research in the inexhaustible domain of Nature's great problems being rarely undertaken by our best and healthiest thinkers. It is the money-making age, in which genius and talent seek immediate reward. The incomparable genius of our phenomonal Edison may coquet with sound and electricity, so that the human voice may be heard for miles and miles away, the sweetest notes of music transmitted to future generations, and the eternal stars rivaled by his electric lights and belts of splendor; yet he is one among the thousands. If there is nothing

great in the universe but man, and nothing great in man but mind, then indeed the American Nation should look to it that our institutions and our literature should be of the most enduring character.

The suicidal tendencies are becoming fearful, and men and women, for the hope of gain and display, are wrecking their physical and mental beings upon the shoals of fashion and in the excitement of reckless speculation. The Greeks rarely committed suicide, but the Romans at one time made it quite fashionable. It is a remarkable fact that suicide is rarely known among the Jews, and no one can cite a case of an American negro taking his own life. If the spirit of humor were more cultivated among all our people, longer life, greater health, prosperity and happiness would follow. France to-day is in the lead of all other countries in the matter of suicide, last year's statistics showing that 215 persons out of every 1,000,000 inhabitants in that country took their own lives and of the 4,572 suicides in France in the one year one-fifth were in the City of Paris. The French people are indeed an emotional and impulsive nation, but in this broad land of America, there is room enough for the American Nation proper, without so many premature exits to that unknown country from which no traveler returns.

Could medical, physiological, or pathological science furnish an alembic for the mind, or could the learned profession prescribe some antidote for mental ailment, or, as Shakespere causes the conscience-stricken Macbeth to exclaim to his Doctor:

> "Canst thou not minister to a mind diseased,
> Pluck from the memory a rooted sorrow,
> Raze out the written troubles of the brain,
> And with some sweet, oblivious antidote
> Cleanse the stuffed bosom of that perilous stuff
> Which weighs upon the heart?"

The doctor ingenuously replies: "Therein the patient must minister to himself." Or as Pope in his Essay more forcibly puts it:

> "Know then thyself, presume not God to scan,
> The proper study of mankind is man. * * *
> Hence different passions more or less inflame,
> As strong or weak, the organs of the frame.
> And hence one master passion in the breast,
> Like Aaron's serpent, swallows up the rest.
> As man, perhaps, the moment of his breath
> Receives the lurking principle of death,
> *The young disease*, which must subdue at length,
> Grows with his growth, and strengthens with his strength.
> So, cast and mingled with his very frame,
> *The mind's disease*, its ruling passion came."

St. Paul, the greatest of the Apostles, over 1,800 years ago, seems to have fully comprehended the imperfect nature of man, and to a certain extent diagnosed *impulsive insanity* in these words: "For I know that in me (that is, my flesh) dwelleth no good thing; for to will is present with me; but how to perform that which is good I find not. For the good that I would I do not; but the evil which I would not, that I do."

Maudsley on the Mind says: "It is no longer an idea, the relations of which the mind can contemplate, but a violent impulse into which the mind is absorbed and which irresistibly utters itself in action."

The great Prussian medico-jurist Caspar, in his Forensic Medicine (vol. 4, 334), well observes: "I am convinced that such pure cases actually occur far more frequently than their literary history would seem to show."

Blandford, quoting Esquirol, Marc, and Georget, also maintains that such cases exist, and are not merely invented by doctors to excuse crime, as is sufficiently proved, *first*, by the observation of patients actually secluded or treated for this one form of insanity; *secondly*, by the confession of those who have suffered from an impulse, or have either controlled it or have come voluntarily (like the Chicago case) and begged to be restrained, feeling unable to control themselves longer. In fact there can be no doubt about the evidence of insanity marked by such impulses, the disputed question being whether the insanity is not recognizable by symptoms other than the impulsive act. Dr Gray, of Utica, gives particulars of more than 52 homicidal cases, and we think the line may well be distinguished and drawn in this type of mental aberration.

It does not by any means follow that because some men are irresistibly drawn into the maelstrom of Wall Street life, that they are impulsively insane, and yet the marginal fictions and realities, with the "*bulls*" and "*bears*" of that famous quarter, will and

often do unbalance the keenest of intellects. A cablegram from St. Petersburg, Berlin, Paris, or London, flashed over the tickers, often creates the wildest confusion and pulsations. No wonder that impulsive insanity is on the increase in the United States, or that all the asylums are filled, and the reports show an alarming increase and demand for more room and facilities. There are undoubtedly persons in some of those institutions that ought to be released, and many more outside that ought to be confined there.

The annual reports of all state institutions for the imprisonment of criminals and the Society for the Prevention of Crimes show that within the past few years there has been in nearly every section of the country an alarming increase of suicide and crime, and one of the great questions of political economy is how to overcome these tendencies. No person tainted with insanity (where the insanity is fully established) should ever be imprisoned as a criminal. Civilization, humanity and enlightened legislation and jurisprudence, all proclaim against such possible emergencies. Lord Chief Justice Cockburn, as the most eminent Jurist of the highest Court in England, in a very learned communication to a select committee appointed by Parliament in 1874 to consider amendments of the laws of England as to homicide, wrote: "I concur most cordially in the proposed amendment of the law, having been always strongly of the opinion that, as the pathology of insanity establishes the fact that there are forms of mental disease in which, though the patient is quite aware he is about to do wrong, the will becomes overpowered by the force of an irresistible impulse, and the power of self-control, when suspended by mental disease, becomes I think an essential element of responsibility."

Another eminent English Jurist, Lord Chief Justice Borill, in the trial of an American surgeon in London in 1872, charged the Jury that, "if the evidence satisfied them that the prisoner, at the time he committed the act, was not in a state of mind to distinguish right from wrong, and was not capable of controlling his actions, then he would not be responsible for the act he committed."

The leading and most important case in English jurisprudence upon the question of insanity, as a complete defense for alleged crime, and as illustrating the position of that great government upon the subject, was the Hadfield case. He was tried in the Court of King's Bench for the offense of high treason, for attempting the life of King George the Third, by shooting at him with a revolver at the Drury Lane Theatre, at an evening performance in 1800. When the trial came on, at the prisoner's request Mr. Erskine, the greatest advocate at the English bar, was assigned by the Court, at the Government's expense, to defend the accused, the only defense which he could interpose being that of insanity. Hadfield had been a faithful soldier in the King's army, and had received a wound upon the head in one of the battles. He was subsequently discharged from the service, and thereafter lived with his family in London. He did not manifest in his home life any particular symptoms of insanity, but conceived the idea that he would assail the King, and then be tried and convicted for high treason. He went to the theatre without attracting any attention, and as the King entered the royal box, he arose with the audience and, taking deliberate aim, fired at the King, the bullets passing over the royal box. Hadfield was at once seized, and made no resistance. He showed no appearance of a deranged mind, spoke with calmness, and said that he knew perfectly well that his life was forfeited, and only regretted the fate of his wife. He was acquitted by the jury on the ground of insanity, and the doctrine established in that case has ever since prevailed in the courts of Great Britain.

Of a similar nature in some respects was the celebrated Guiteau case, which, however, stands in broad contrast to that of Hadfield. In the former case learned and eminent experts differed broadly and honestly and very materially as to Guiteau's insanity. You will readily observe the distinguishing feature from the English case. Hadfield had received a wound upon the head and thereafter became subject to *delusions*, and manifested symptoms of insanity. Guiteau, as the evidence disclosed, had received no injuries upon the head or otherwise, but for months previous had brooded over his dis-

appointment in not receiving recognition and reward for political services rendered his party. He was undoubtedly impelled to the act by a diseased and morbid condition of the mind, and yet he was not afflicted with that type of insanity which should excuse for crime. He had a keener foresight of the successful elements of defense than his counsel, and did not believe much in the theory of insanity interposed in his behalf, but preferred that his counsel should urge as a defense that the immediate cause of the death of President Garfield was not the gunshot wound, but an inefficient diagnosis of the wound, immediately after it was received, and the final removal of the patient from Washington to the seashore. Dr. Agnew, of Philadelphia, that profound and eminent surgeon, stated in the autopsy that death was not the immediate result of the gunshot wound, and Guiteau as a lawyer knew that under the common law which prevailed in Washington, the Court would be bound to instruct the jury that, unless they believed and found from the evidence that death was the immediate result of the gunshot wound, then they could not convict of murder in the first degree, and thus he hoped to escape the death penalty. I once succeeded in saving a doctor's life upon that principle. The man whom he had shot survived four days, and on the evening of the fourth day a slat in the bed gave way, which caused the body to sink a little, thereby producing an internal hæmorrhage, and the surgical experts testified that if it had not been for the sinking of the slat, causing the internal hæmorrhage, the deceased might have recovered. The Court charged the jury to the effect as above stated.

Without further comment upon the Guiteau case, as to the theory of insanity, or the testimony *pro* and *con* upon that subject, the case is cited more in illustration of my point in favor of *vivisection* of the condemned criminal in cases of homicide after the death sentence has been pronounced by the court of final adjudication. If there had been a law in the District of Columbia to the effect that on the day fixed by the Court for the execution Guiteau should be given over to a Medical Commission, composed of eminent surgeons and experts, who would have given him a painless death, and at the same time have had the benefit of a thorough and complete vivisection of his brain while the life force in his body was still at play, great discoveries might thereby have been made for the benefit of physiological and medical science. It is said that the mind is divided into three parts, the *intellect*, the *emotions*, and the *will;* that we are not born with mind, but that it is slowly and gradually developed, and with many matures only at old age, and it may safely be asserted that with some there is never a full and complete development.

Phrenology is the only science that assumes and presumes to especially localize the functional parts of the head and brain, and while the medical profession may not regard with favor its researches, yet it must be admitted that Mrs. Charlotte F. Wells in her excellent Journal of Phrenology, and her co-workers, are doing much good work in that line of development. It matters not what term may be applied to the study of the human mind and brain, whether you call it mental physiology or pathology, or any term that learned scientists may see fit to apply, it must be admitted that all investigations in that direction will ultimately result in benefit to the human race. The phenomena of mind development, quality, and power may at present be quite beyond the reach and scope of the skillful surgeons and experts, yet the time must come when the scalpel and microscope, in the hands of the learned and profound scholars of human anatomy and pathology, will reveal the hidden secrets of the brain.

That learned and eminent German student, Professor Koch, who from long years of patient toil, study, careful research, and experiment has, by his investigations and experiments, aroused the slumbering energies of his great profession, merits the comment, praise and criticism which the profession have given him in the last few months. Only about three years ago he caused the *germ* which he believed to be the cause of pulmonary consumption to be communicated to an ordinary cat, which animal is generally believed to be exempt from such diseases. The cat became consumptive, and thus it was discovered that the germ which is uniformly

found in the epithelium of diseased lungs could be transmitted, and that the terrible disease is contagious.

We have stood at the dissecting table with profound interest and thought, as the human brain was being dissected, and asked the skillful surgeon to point out the seat of judgment, the throne of reason, the mystical tablets of memory, or the empire of that winning mistress, the imagination, and the only effort he made was to point out the *pineal gland.* We asked: Show us the domain of the emotions, and of the impulses, and we were referred to that coquettish organ, the *heart*, which is separate and distinct from the brain, and from a medico-legal standpoint, contains no element of the mind quality, and yet happy Tom Moore, in that beautiful song, "The Last Rose of Summer," eloquently writes:

> "When true hearts are withered,
> And fond ones are flown.
> Oh, who would inhabit
> This bleak world alone."

The busy little honey-bee, which comes the nearest to the human family in its social life, instincts and economy, when brought under the microscope does not reveal a particle of brain substance in the head, and apparently has no heart at all; and one of the strangest features of its brief existence is that the drone consummates its romantic life while in the air on the wing in the single act of procreation, while the gay and coquettish queen flies away to her hive, and thereafter deposits in the comb-cells twenty-five hundred eggs a day for several consecutive days, and for even two or three seasons; and, still more wonderful, when the little queen elopes, wanders away or dies, the female workers (for all the workers are females) at once so shape and supply a special comb-cell that in the brief period of sixteen days a new queen is produced. We do not, of course, claim that there is any special impulse about all this; it is given merely as a side thought from the great book of Nature, tending to show that from the life of the bee we may gather many sweet and golden thoughts.

In New York, New Jersey and California, in 1875, the lamented humanitarian, Henry Berg, secured the passage of a law known as "an act for the prevention of cruelty to animals." Professor Dalton of this city, and others, made a heroic effort to secure a clause in the same act legalizing vivisection, and Section 2556, vol. 3, Revised Statutes of this State, now in force, reads as follows:

> Nothing in this act contained shall be construed to prohibit or interfere with any properly conducted scientific experiments or investigations, which experiments shall be performed only under the authority of the faculty of some regularly incorporated medical college or university of the State of New York.

New Jersey and California have enacted substantially the same law. If the vivisection is improperly conducted—that is, as to needless or unjustifiable suffering—the offender under the law is punishable by fine and imprisonment, the maximum term of imprisonment being one year in the county jail, including thirty days of solitary confinement, with a fine of two hundred and fifty dollars.

In Great Britain they have large buildings especially constructed and arranged for vivisection so that the largest possible benefit may be acquired by such operations. What we now ask is that the Legislatures of the several States shall take one step further in the domain of legislation for the benefit of science, and pass laws creating Medical Commissions to whom shall be turned over the person of every duly tried, convicted and condemned homicide, and enacting that on the day fixed for the execution they shall take the culprit and give him an unknown and painless death, with all the advantages of vivisection. And here let me ask of every candid and impartial thinker, Would it not be more humane to coax the spark of life out of the condemned, under the skillful touch of the operator and while the subject was under powerful anæsthetics, than as it is now, to choke it out with a rope, or burn it out with electricity? Take for instance the case of Loppy, the wife-murderer, who was executed at Sing Sing last Monday. If, instead of burning his life out with electricity, a Commission could have taken him for the purpose of vivisection, science and mankind generally might have received great benefits from the execution and its disclosures. The maudlin sentimentality of the outer world has nothing to do with the body or the life of the homicide after the final sentence of death has been pronounced. Let the culprit

thus enter the dark shades of oblivion to all the world save medical and physiological science. If such were the case, there would be no sensational or graphic reports flashed across the continent by eager reporters, breeding the sickening ghoul of crime in unbalanced and diseased minds. It would have a most powerful tendency to prevent homicide, for if the persons contemplating that dreadful act were to realize that their lives might in turn be forfeited, and the mode or method of final exit unknown, they would be less apt to chance the hazard of conviction and execution.

We are living in an exacting age, and are eminently practical in most things. Making money is the orthodoxy of every-day life, and yet in the days of Plato, he taught his pupils that education was asking one's self. In other words:

"Think for yourself; one growing thought,
If known to be your own,
Is worth a thousand gleaned from fields
By others sown."

Huxley in one of his last productions, "Advances of Science in the Last Half Century," says: "The great steps in its progress have been made by men who seek knowledge simply because they crave for it. Nothing great in science has ever been done by men, whatever their powers, in whom this divine afflatus of the truth-seeker was wanting. Men of moderate capacity have done great things because it animated them; men of great natural gifts have failed because they lack this one thing needful." We read in the great and good Book that when the Infinite Architect of the Universe had finished the wondrous plan of Creation, and had produced man as the master-piece of all His handiwork, then the idea of creating woman as a suitable companion came over the supreme thought, as a summer dream, and a deep sleep came upon Adam, and while thus unconscious of pain the magical rib was taken from his side, from which lovely women was fashioned. It is not recorded that this operation was performed while the first man was under the influence of anæsthetics, or that he ever complained after the operation, and through all of the ages no one has presumed to question that operation. Even now the sweet lyric spirit of Ireland's gifted poet seems to echo from beyond the skies these charming words:

"O woman, lovely woman,
Nature made thee to temper man.
We had been brutes without thee,
Angels are painted fair to look like thee,
There is in thee all we believe of Heaven,
Amazing brightness, purity and truth,
Eternal joy and everlasting love."

If then such a marvelous creature could be fashioned from the ordinary rib of man, we are inclined to believe that vivisection of the human brain might reveal the hidden grandeur and beauties of human intellect.

Byron in "Childe Harold," as if inspired by the infinite touch of the Creator, eloquently wrote:

"The dome of thought, the palace of the mind."

We conclude our dissertation with these significant lines:

"Each thing's a feeling and a thought,
Within my soul divinely wrought.
All this created and combined,
Compose my universe, my mind."

CASCARA SAGRADA AS A TÆNICIDE.

BY J. C. STEPHENS, M. D.

For several years I have employed cascara sagrada as an aperient, alterative, intestinal tonic, and positive tonic for habitual constipation. My experiences with the drug, and the universal satisfaction it has given, doubtless are identical with those of many practitioners, but who ever imagined cascara sagrada possessed properties that render it an effective tænicide?

Well, perhaps it is not; but if not, the coincidence occurring in two cases is, to say the least, remarkable.

On November 9th last I was hastily summoned to attend one Mrs. B., in confinement, a lady already twice a mother. On arrival I found her suffering considerable pain of an intermittent periodic form, but scarcely of the nature expected from the account given by the messenger; it partook rather of a colicky than uterine character. Next, vaginal examination conclusively proved the pains were not due to the throes of labor, nor even to a miscarriage or abortion.

Inquiry into the history of the case re-

vealed that Mrs. B. had removed to Valparaiso from a neighboring town scarcely a month before. In July last she noticed a marked increase in size of the abdomen, which led her to call upon a local practitioner, who, in spite of the fact that the patient had continued to menstruate regularly since the weaning of the second child, pronounced her four months pregnant.

More critical examination revealed that the uterus positively did not contain an ovum, and I decided the abdominal enlargement arose from flatus. The patient was intensely nervous, however, and apparently very susceptible to influence, especially if such happened to coincide with her preconceived opinion.

I had some difficulty in convincing her of the correctness of my diagnosis, and in fact but half succeeded. However, the severity of the pain was such as to demand speedy relief, and I gave her hypodermatically a quarter of a grain of morphine. As the drug arrested its influence, I left to visit other patients, promising to call again four hours later.

At my second visit I found the patient less bloated, and resting easily. She expressed great wonder as to what could "the matter be." She had considered it somewhat strange that she should menstruate regularly if pregnant, but Dr. Blank had assured her such was by no means an uncommon occurrence, and she felt satisfied, because she "thought the doctor ought to know."

Straightway I elicited the fact she was habitually constipated, the bowels remaining torpid for days in succession, at best not moving oftener than twice, or, at farthest thrice, during the week. A partial evacuation had occurred, however, just prior to my entrance, and on request was submitted for inspection. To my great astonishment, and no less that of the patient when their character was explained, I found several proglotides of tænia solium. The patient now admitted passing like objects for several months, but without the most remote idea of what they were, and paying little attention thereto because they "seemed of no moment."

I now informed her of the necessity, first of relieving her nervous condition, and regulating the bowels, after which—in a few days—I would endeavor to dispossess her of the unwelcome guest harbored. I then prescribed:

℞ Acetanilid, 2.60 grammes.
Sodii bicarbonates, 0.45 gramme.
Divide into eight powders, of which one was to be taken every four hours.

Also:

℞ Fl. ext. cascaræ sagradæ
(P., D. & Co.'s), 24. grammes.
Syrupii auratii, 100. grammes.
M. Sig.—Teaspoonful three times daily before meals.

One dose of the cascara mixture was taken the same evening, Dec. 11th; three doses on the 20th; on the succeeding day three more; and at midnight on the 21st the bowels moved copiously when, to the astonishment of both patient and myself, neither of whom had expected such result, two fully developed specimens of tænia (species *Solium*), including head, were passed, one of which exceeded ten feet in length, the other five feet.

I advised continuance of the cascara mixture, with the result that, three days later, a third tænia was expelled of about the same proportions as the smaller of the two previously passed.

The patient constantly improved from the 21st of November; the abdomen rapidly diminished in size and there were no further accumulations of flatus; a fortnight after my first visit she asserted her health was better than for a year or more, so much so she proposed to dispense with her servant and herself assume the care of the household. She continued the cascara mixture, however, and still employs it as occasion requires. December 26th she passed another tænia, two yards long, with head and all intact.

During this time (on Nov. 25th) I discovered her little son was passing segments of tænia, and at my suggestion, half-teaspoonful doses of the cascara mixture were given him three times daily. Two days later (the 27th) he voided a complete tænia, five feet in length. As he had taken no acetanilid, this drug certainly cannot be considered a factor in the case.

Query.—Was the cascara responsible for the expulsion of the tape-worm in these two instances?

I fancy myself more than ordinarily familiar with the virtues of rhamnus purshiana, both from therapeutical and physiological standpoints, but I fail to recall any instance in which it has been accredited with vermifuge or tænicide properties.

To be sure, these two cases are not positive evidence that cascara is possessed of such special qualities, for, as before intimated, the results may have been coincident merely; nevertheless such coincidence is suggestive and astonishing, and if opportunity presents I certainly shall invoke the help of cascara with somewhat pronounced expectation of successfully removing the parasite from its host.

If my surmise is correct, certainly a new field is opened up for this medicament that has hitherto been unoccupied, or as the newspapers say, "it fills a long-felt want"—for there is none of the griping, nausea, vomiting, and other torments that accrue to the use of the entire lot of so-called tænicides, and no occasion for fasting prior to medication.

Valparaiso, Nebraska, Dec. 20th, 1891.

FLUID EXTRACT PICHI AND RENAL CALCULI.

BY O. W. BRAYMER, A.M., M.D.

When a patient complains of dull aching pains in a circumscribed area of the lumbar region; when at intervals there is an increase of this suffering, together with more or less suppression of the urine, which is of a high color, smoky, and contains considerable quantities of uric acid, or lime and triple phosphates; when at times there is present more or less blood and mucus with epithelium from the pelvis of the kidney in the urine, look out for a storm, because these symptoms, the whole or a part, are the forerunners of that painful trouble, renal colic.

Suddenly after violent exercise, stooping, riding, or running, and indeed sometimes when lying quiet in bed, there will come like a flash violent, almost overpowering, pains, which radiate in various directions but more particularly downward through the groin into the testicles or labia to the thighs. There is a constant desire to urinate, but very little can be voided. The patient screams in agony, his countenance becoming pale, the extremities cold, the heart's action weak, and syncope possibly occurring in the weaker subjects. These symptoms may be more or less prolonged, may be of different intensity, but relief takes place only after the calculus has reached the bladder. Then there will be a calm, which is soon followed by the same symptoms, however, should more calculi attempt to pass through the ureter. These attacks may come without any previous warning, but are most apt to be preceded by more or less suffering in the region of the kidneys.

What can we do in these cases? Of course if we are called before the acute colic begins, a regulation of the patient's habits and diet will be of use, and the treatment which is outlined below will be of great importance. However, if we only see the patient for the first time when he is in his greatest pain, the first thing to do is to give a hypodermic of morph. sulph. together with atrop. sulph. in doses to suit the age and conditions of the patient. Apply warm applications to the abdomen and back, and give ext. pichi fl. in large doses internally, together with the free use of lithia water. These remedies should be used for a long time.

The following case will well illustrate the virtue of this treatment: A male, past middle life, was taken with a violent renal colic, and we saw him while suffering from the worst attack he had had. Heretofore a hypodermic had relieved him. This time he was taken when some distance from home, and although he had been given a hypodermic of morphine by some local physician where he was stopping, he was almost a maniac when I first saw him. He was in terrible agony, rolling on the floor, and pleading for relief, but finding no comfort in any position. It was only after having received one-half grain of morphia with one-seventy-fifth of atropia sulphate that he experienced any relief. This was inserted deep into the muscles of the lumbar region, at a point from which the pain seemed to take its origin. There was almost complete suppres-

sion of the urine, a constant desire to urinate, with intense irritation of the penis and bladder. He was given fl. ext. pichi in drachm doses every three hours; hot applications were applied to the back and abdomen; and after twenty-four hours of this treatment, almost all the suffering and irritation had ceased. He was then ordered to continue the pichi and to drink freely of Farmville lithia water.

This man remained home from his business six weeks, during which time he had three attacks, the last two not so severe as the first. This was no doubt due to the pichi, which lessened the sensitiveness of the parts and thereby relieved the pain. There was no doubt in the diagnosis, because he passed three calculi, each one a few days after the paroxysm of colic had subsided. The last calculus seemed to give the greatest difficulty. For several days there would be complete stoppage of the flow when urinating, with a sensation of something thumping against the neck of the bladder.

After ten days the calculus was voided with urine, and was so large that it gave great pain and lacerated the urethra so much that blood flowed quite freely from the meatus. The soreness subsided very rapidly under the use of the pichi, and now for several months the man has had no symptoms of any return of the trouble.

Thus in many cases where there had been attacks of renal colic, or where such were threatened, we have obtained good results from the use of pichi and lithia water.

A middle-aged lady, who had suffered for months with this trouble, rapidly improved under pichi used in moderate doses, and stated that she had not felt so well for years.

I call to mind a young lady who had frequent attacks of this malady, and after taking pichi for some months she seems much improved and has been without suffering for months.

Now we have a valuable aid in both renal and vesical troubles in pichi fluid extract. In simple cystitis and in cystitis following gonorrhœa we have seen its good results. Under its influence lacerations of the mucous membrane of the penis are rapidly healed, and patients are able to urinate freely, with very little irritation or pain.

Finally, we are led to believe that pichi has some power to help in the disintegration of calculi, either renal or vesical. The use of the lithia water is twofold—it acts on the calculi and also flushes out the kidneys, which is a prime factor in the treatment of this disease. Finally, in morph. sul., with atropia to relieve the pain in the acute attacks, followed with pichi fl. ex. in full doses, together with the free use of lithia water, we have the ideal treatment.

HEART FAILURE.*

BY SAMUEL BELL, M. D.

The great number of sudden deaths said to occur from heart failure among individuals in all conditions and positions in life opens up a field for study among cardiologists which has hitherto been little treated of, and has not commanded the attention that the importance of the subject merits. Sudden death, as the result of cardiac failure, occurs in a percentage of cases where upon post-mortem examination no lesion can be found. The organic lesions most frequently found after sudden death from heart failure are fatty or fibroid degeneration of the muscular walls of the myocardium, or a diseased condition of the aortic and coronary arteries. Sudden failure and stoppage of the action of the heart is said to occur in diastole, and to take the form of a gradual declination or waning of its ventricular action, both in systole and diastole, until the latter is the last action. The fibrillar contraction and normal cardiac irritability are lost, and the great central organ which moves the whole organism remains in a quiescent condition. Sudden death no doubt takes place when the above condition exists, but in the writer's experience, borne out by clinical and post-mortem examinations, the heart does not cease to beat in diastole gradually, but after an extraordinary ineffective effort, and in some cases a violent incoördinated manifestation of ventricular energy will be observed, styled by some writers a tumultuous action, but ineffective. The ventricles have become distended, heart-strain takes place, the worn-

* Paper read before the Michigan Surgical and Pathological Society.

out muscle is unable to expel its contents. When sudden death occurs from stoppage of the heart, and there has been no mental or muscular effort, the foregoing is the most probable condition of the heart, and will account for the many cases of sudden dissolution which occur during sleep and under favorable circumstances.

In a series of experiments made by Dr. Schott the pathology of cardiac strain was put to an experimental test. He induced acute strain of the heart in a perfectly healthy, strong man by means of wrestling; the more vigorous and violent the exercise, the more quickly breathlessness was induced. In another series of experiments the abdomen was encircled with a girdle applied below the borders of the ribs, so as to restrain the diaphragm, compress the bowels, and otherwise raise intra-cardiac pressure.

Over-strain as a cause of heart failure frequently occurs when from any cause the aortic opening is narrowed, impeding the outward flow of blood to such an extent that both ventricles become distended from intra-ventricular pressure, and the heart muscle becomes wearied and fails to completely empty its contents. This condition exists quite frequently in women who have just passed through a severe and protracted labor. An old custom, encouraged especially by mid-wives, of having the woman in labor distend the air passages with air, retaining it as long as possible, impedes the circulation, as respiration and circulation are *pari passu*, and an enlarged limb is often the result, which only passes away when normal contractility of the myocardium returns. All violent exercise spends its force primarily on the right heart and causes shortness of breath. The venous blood is emptied into the right heart with such rapidity and in such an amount that the lungs cannot take care of it, shortness of breath follows, and a condition known to the laity as "out of breath" exists. In professional athletic performances,when begun and continued gradually, the lungs will accommodate themselves and take care of the blood as it is sent in greater rapidity and larger amounts. This physiological phenomenon with reference to circulation and respiration is well understood by professional physical trainers of both men and animals. Great hopes are often realized in the second breath. In beginning active exercise moderately the venous strain of the right heart is removed to the left and the circulatory equilibrium established.

One or both of two conditions generally exist when the heart is strained—the cardiac muscle must be in a distensible condition, and a distending force be present. Dilatation, or distension, is often present in connection with some disease, and plays a very important part in the prognosis of the same. In all acute pulmonary diseases the above condition exists, and every physician is aware of the importance of maintaining the latent power of the central organ in pneumonia. When the temperature goes higher, with profuse perspiration, the apex beat may be in the normal position, but less distinct, and the heart sounds become feeble. The normal ventricular impulse of the first sound becomes shortened, and discrimination between the first and second sounds becomes more difficult on account of the sounds becoming similar. When the above symptoms occur in the course of any acute febrile disease, and especially in pneumonia, the heart is yielding to the extra strain put upon it, or its walls have become so weakened from a change in the normal constituents of the blood and myocardial nutrition is so interfered with that the patient succumbs in spite of our best efforts.

By directing our attention to and observing the first approach of cardiac failure, even anticipating it by appropriate stimulants and assisting nature in the speedy elimination of the materies morbi from the system before it has so weakened the cardiac muscle and paralyzed the nerve distribution, the patient would be carried over the period of greatest strain with a larger percentage of recovery. We hear almost every day of men in all conditions of life, and many at about the meridian of life, taken away apparently without any premonition while pursuing their daily avocation, others, again, having undergone an extra mental strain.

I present a specimen of a heart in a man who died shortly after being received into the hospital. The history is rather obscure. The ambulance surgeon reports his respirations very rapid and labored; temp. 101°,

pulse 110, when received into the hospital. Post-mortem examination was held ten hours after death. The following condition of the heart and lungs was found to exist: The myocardium was somewhat enlarged, the muscular fibrillæ of its walls very fragile, the heart when clasped by the two hands could be easily torn, and clots were found in the ventricles of gelatinous consistence and evidently of recent formation. No vegetations were found upon the valves or chordæ tendinæ of the columnæ carneæ. The lungs presented a gray, mottled appearance on the surface, and upon section a puriform fluid exuded. The granular appearance found in the second stage of pneumonia had almost disappeared, and the third stage, or the stage of gray hepatization, had evidently developed. The cause of death was heart failure. Heart clots were found, as is frequently noticed in cases of heart failure. The normal oxygenation of the blood did not take place, carbonic acid, retained in the system, paralyzing the motive power of the heart.

The prognosis of pneumonia, when it occurs in patients who have been previously addicted to the use of alcohol, is not nearly so favorable as when there has been no history of chronic alcoholism. Microscopic examination of the muscular fibres of the heart in the case just noted revealed fatty degeneration. In addition to the blood clots which were found in the right ventricle, in the meshes of the columnæ carneæ was found a large deposition of fat. The latter, taken in connection with the extreme fragility of the tissue of the myocardium, would explain the cause of the weakness of the ventricles and the heart failure.

As to whether any amount of stimulation would have saved the patient, I would say that, taking into consideration the patient's general condition and the extensive inflammatory depositions, with no indications of the lungs clearing up, I am of the opinion that no amount of proper stimulation would have saved this patient.

REPORT OF THE DETROIT SURGICAL AND PATHOLOGICAL SOCIETY.

CYST OF OVARY.

Dr. Armstrong presented the ovaries and tubes taken recently from a young woman, aged twenty years, who had been epileptic since she began menstruating at sixteen years of age. At first the epileptic seizures occurred only during occasional menstrual periods, but during the past year every menstrual period has been characterized by from one to five epileptic paroxysms. The general health of the patient was somewhat impaired by the large quantities of bromides she had taken. There was no marked tenderness over the ovaries on pressure. Her memory was weak, and she had at times severe outbursts of temper. The ovaries were diseased, and the tubes were markedly hyperæmic. The stroma of the left ovary appeared to have almost entirely given way to cystic degeneration.

In answer to a question, Dr. Wyman said that he had known castration apparently to cure two cases of epilepsy in males. He had known the removal of cystic testicles to cure a man of hysteria. Dr. Hough asked if the cystic ovary and diseased tubes might not be treated by evacuation and the application of drugs directly to the cyst cavities, and so save the sound portions of the organs. It was answered that the efforts which have been made in that direction have been failures.

Dr. Parker said he was surprised that some conservative and sensible gynæcologist had not returned ovaries and tubes to the peritoneal cavity after treating them by means other than amputation. All conservative efforts thus far have been confined to treatment without a laparotomy—the use of galvanism and intra-uterine applications.

HEART FAILURE—AN INTERESTING SKULL.

Dr. Bell presented a heart removed from a patient who died of heart failure. The heart-walls are very thin and the valves are not diseased. The microscope showed fatty degeneration of the heart muscle.

Dr. Alderman presented a skull with long hair properly attached to it; also the atlas and a part of the axis. The skull was found alone, and no other parts of the skeleton were with it. It had been buried in sandy soil. He wished to learn how long the skull had probably been dead. As the bones of the neck had been separated by some sharp instrument, a murder might have been committed.

Dr. Smith spoke of the difficulty of ascertaining the length of time bones had been in the ground. The character of the soil—wet or dry—had much to do with the rapidity with which the animal matter would be dissolved. The hair, Dr. Raymond thought, might give some evidence which would clear up the case, and he suggested a microscopical examination.

PROLAPSUS UTERI.

Dr. Armstrong spoke of a case of complete prolapse of the uterus which he had treated by fastening the fundus uteri to the anterior wall of the abdomen by means of a strong catgut suture. He did not open the peritoneal cavity, but dissected down to the peritoneum, had an assistant hold the uterus well up in the pelvis so that he could easily feel it, and then he transfixed it with a needle armed with catgut, and stitched it to the side of the abdominal wound. The wound was then fastened with interrupted sutures as in ordinary laparotomy. The patient is convalescing at the Emergency Hospital.

Dr. Newell spoke of the uselessness of treatment by means of drugs for prolapsus uteri, and thought the case described, if successful, would show that operative measures for the relief of the deformity were not all dangerous. The method by closing the vagina in front of the uterus was barbarous as well as dangerous.

ACTINOMYCOSIS.

Dr. Wyman presented half the lower lip which had been removed a few days before from a patient in the Emergency Hospital. The lip was removed because of the presence in it of a tumor which began last March in a crack near the angle of the left side of the lower lip. It had steadily increased in size until it extended down to the jaw. A number of sinuses made their appearance at various times on the tumor, and discharged quantities of greenish-yellow pus. The patient had never suffered from venereal disease. He had, before coming to the hospital, had good constitutional and local treatment, but the disease seemed to advance steadily. A microscopical section of the tumor was shown to the Society. There was revealed a mumbling sarcoma, with occasional round nest-like bodies like the alveolar sarcomas.

Dr. Raymond, who made the microscopical examination, thought the round bodies which contained spindle-shaped or caudate cells were the actinomyces of actinomycosis, or, say, fungus.

Dr. Wyman said the patient had killed a cow last fall on his farm because of a tumor on the jaw which discharged pus, and that he had one now suffering from the same disease which he expected to be obliged to kill. He had consulted a veterinarian about his cattle, but got no satisfactory information.

FRACTURE OF HYOID BONE—RESECTION OF ELBOW.

Dr. Scriber presented a specimen of fractured hyoid bone which he had found in the dissecting room. The left cornu had been broken near its junction with the body of the bone, and had healed perfectly but with angular deformity. It had apparently caused the patient no trouble after the healing process, as the structures of the throat were otherwise sound.

Dr. Wyman presented an elbow joint which had been removed because of suppuration following a compound fracture of the ulna. The temperature declined after the resection, and did not again rise above 99° F. The patient is now developing the functions of a new joint.

A CASE OF THE KEELEY TREATMENT.

W. Johnston, M. D., in Medical World January, 1892, reports the following case of a victim of the Keeley treatment:

Miss G., aged 30, a morphine *habituée*, began the home treatment by Leslie E. Keeley, with the "bichloride of gold," about two months ago. She took two bottles, about twenty ounces, of the remedy, losing about twenty pounds in weight. I credited the condition to the "bichloride of gold" and at once vetoed the remedy. Prescribed:

℞ Calomel, grains v.
Pulv. podophyllin, grains x.
M. Sig.—One powder at bedtime, repeated every second night.

I also gave tablespoonful doses of syrup trifolium compound three times a day and wine-glass doses of infusion of buchu twice a day.

The patient is on the high road to recovery.

Correspondence.

NEW YORK LETTER.

Discouragements of Young Practitioners and Overcrowding of the Medical Profession—Impulsive Insanity—A Fifty-Thousand-Dollar Suit against the New York Hospital—A Curious Case—The Influenza.

In a recent issue of the New York Medical Record, the following advertisement appears: "A young physician, practicing in this city for nearly two years, and earning less than one-quarter of his expenses, desires to know of an opening where at least he can make a living.—Dr. Discouraged." In commenting on this editorially, the Record speaks of the overcrowding of the profession in New York and other large cities, and states that if this young man is making anywhere near one-quarter of his expenses, he is better off than the majority of medical men of his age, professionally.

It would be interesting as well as encouraging to many young, struggling doctors to know how the successful men in the profession fared during their earlier years of practice. Many of them, no doubt, can recall the time when they grew weary of waiting for patients who did not come, and when the only use they had for their surgical needles was to sew on stray buttons with them.

At a meeting of the New York Academy of Medicine a few weeks ago, Dr. William T. Lusk read a memoir of the late Fordyce Barker, from which the following is a quotation: "It was my privilege, in 1853, while in attendance upon the old Anthon Grammar School, in Murray street, to spend a few months in Dr. Barker's family. His practice was at that time small. It is needless to state to a body of physicians that neither popularity as a teacher nor distinction as an essayist influences the number of visitors in a practitioner's ante-room." So it appears that even so long as thirty years ago a man with the ability of Fordyce Barker went through an experience similar to that which this young "Dr. Discouraged" complains of.

As to the overcrowding of the profession in New York and other large cities, to which the Record refers, the following figures, showing approximately the number of inhabitants to each practitioner in the following cities, may prove interesting:

	Doctors.		Inhabitants.
New York City	1	to	750
St. Paul, Minn.	1	to	800
Detroit, Mich.	1	to	700
Boston, Mass.	1	to	500
Chicago, Ill.	1	to	600
Tallahassee, Fla.	1	to	100
Washington, D.C.	1	to	300
Bismarck, Dak.	1	to	350
Hartford, Conn.	1	to	400
Denver, Col	1	to	300
San Francisco, Cal.	1	to	475
Little Rock, Ark.	1	to	500
Prescott, Ariz.	1	to	500
Montgomery, Ala.	1	to	350

***

A suit for $50,000 has just been instituted against the New York Hospital by a man who claims that through neglect on the part of the hospital surgeons his son's leg had to be amputated. The boy met with an accident, breaking his right leg above the knee, and he was taken to the New York Hospital. The leg became gangrenous, and was amputated by Dr. W. T. Bull. The boy's father now claims that gangrene set in because the fractured leg was too tightly bandaged. On the other hand, Dr. Robert F. Wier, who was visiting surgeon at the time, states that the boy was treated with the utmost care, and that this was one of those exceptional cases where gangrene appears to originate from the pressure of a broken bone on an artery. The case will come on trial next month.

***

The corpse of a man was recently discovered standing in front of an open window in the lower part of the city. The man was subject to attacks of asthma, and probably during the night had gone to the window to get more air. The window overlooks a busy street, and the elevated trains go by every few minutes, and yet the corpse stood there for forty-eight hours before the discovery was made.

***

The influenza, which is raging in Europe and in different parts of this country, seems thus far to have only lightly touched New

York, although the weather has been most desirable for its development. Most of the cases here are of so mild a character that they do not come under the eye of the physician at all.

DETERMINATION OF SEX.

An article on determination of sex was published in THE MEDICAL AGE of November 25th. I cannot see how the author can explain his theory. My experience certainly does not agree with his. I have learned, by an experience of thirty years, that a woman laying habitually on her left side, when she is pregnant, will give birth to a male child, on the right side to a female, ninety times out of a hundred. From this I conclude that one ovary produces male germs and the other female. The question of sex, then, to my mind, depends almost entirely on the decubitus of the woman at the time of her impregnation. If the readers of this note can ascertain from pregnant women as to the side they slept on about the time of pregnancy, I think their experience will confirm mine and enable them to predict the sex.

Yours truly,

DR. LUSSIER.

Valleyfield, P.Q.

A NEW YEAR'S SUGGESTION.

It has for some time been my custom, after reading a helpful editorial or contribution in medical literature, to drop a line of appreciation to the writer.

And having been the recipient of similar tributes, I desire to say they will be treasured in pigeon-hole and memory long after the original MS. has been resolved into ashes.

Recalling then the ingratitude of clients and mindful that our brother's pathway is seldom with roses strewn, let us avail ourselves of these same opportunities to give him a benediction.

C. M. FENN, M. D.

San Diego, Cal.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

B. W. PALMER, A. M., M. D., Editor.

—PUBLISHED BY—

GEO. S. DAVIS, Medical Publisher, Box 470.

DETROIT, MICH., JAN. 11, 1892.

Editorial.

INFLUENZA.

The existence of influenza in epidemic form has led to a renewed discussion of the name, ætiology, prevention, diagnosis, prognosis, symptomatology, pathology, and treatment of this affection. There seems to be unanimity of opinion as to the conditions being best described as catarrhal fever rather than under the name of la grippe or influenza.

Its ætiology has been claimed, with some degree of plausibility, to be microbian, but this theory is not generally accepted as fact—no one has yet discovered with the microscope, or isolated, the specific microbian invader. Recent press dispatches, however, report that Dr. Pfeiffer, the son-in-law of Koch, has discovered the specific bacillus of influenza, and confirmation of these reports will be awaited with interest.

As to prevention, on the theory that the disease makes its invasion through the respiratory organs, the inhalation of pure carbolic acid and glycerin (equal parts), or camphor, daily before leaving the bedroom in the morning, is regarded by some as rendering less susceptible to the contraction and extension of the malady. Naturally, also, the emunctory functions should be kept freely operative, and all causes of nervous disturbance, overwork, indiscretions of diet and undue exposure be avoided.

The question whether one attack protects a patient against a future one has not been definitely determined.

The diagnosis is not difficult nor the onset dissimilar from that of other catarrhal inflammations; the mucous and serous membranes are involved, and the meninges, pleura, and joints.

The prognosis would appear to be more favorable during the prevailing epidemic than during the previous one. The lung complications have been much less marked. The symptoms comprise those due to nervous, gastric, and catarrhal disturbance.

The pathology may be said to be undemonstrated, though by those who accept the germ theory of origin the malady is considered to be a nervous fever induced by a reception into the organism of a pathogenic microbe, which exerts its toxic influence primarily upon the nervous centres.

The treatment must be symptomatic. The patient should be confined to bed until convalescence is fully established, and avoid the dangers of relapse from too hasty resumption of the usual duties. A nutritious diet of easy digestion, red wines, strychnine, quinine, and sedatives are indicated. Small doses of calomel and bicarbonate of soda keep the alimentary canal and other emunctory organs freely open, and absolute rest of body and mind is a *sine qua non* to recovery.

Since the last epidemic there has been a decided reaction against the administration of the new chemical antipyretics, on account of their depressant effects.

The salicylates and respiratory stimulants are freely resorted to, the bromide and benzoate of ammonium, digitalis, and heart tonics being employed when indicated. The sequelæ are sometimes grave and persistent, and patients should be warned against the too sudden resumption of their regular work.

MEDICAL CHARMS.

"Cure warts and corns with application
Of med'cine to the imagination,
Fright agues into dogs, and scare
With rhymes the toothache and catarrh."

Medical charms are believed in by an enormous number of people who do not believe in doctors. And here we do not allude to the equally large class who believe in quack remedies or in many well known ancient and usually more or less revolting nostrums. Our theme is a less familiar one. It is that of a belief in a mere superstitious charm, without anything which is either taken inwardly or applied outwardly. Those who believe in this are for the most part rural, though not always.

For bleeding at the nose a favorite ancient remedy is found in the charm of wearing next the skin a portion of "the moss from a dead man's skull." It is not so very long ago that a woman with a wen on the neck was hoisted up on the scaffold after the execution of a murderer, that the dead hand might be applied to the wen, under the idea that it would thereby vanish. Not very unlike this is another belief, still existent, that to crawl round a grave just filled in will cure boils of the worst description. More than a century ago the habit was practiced of passing ruptured infants through a young ash, severed and held open by wedges, and afterwards plastering the cicatrice up, as a remedy. It is still existent as a belief. So is that of passing children with whooping cough through a bramble bush. Another remedy for this malady is found by carrying the child, on three mornings in succession, over three bridges crossing three arms of a river. For a baby cutting its teeth a necklace of bryony seeds is far superior to anything so prosaic as a surgeon's treatment, provided always that the necklace be hung round the infant's neck at the full moon, and kept in position till the teeth be safely cut.

Warts form now a common object of charms, those who hold them in respect having nothing but contempt for nitric acid and lunar caustic. One very ancient and favorite remedy is to pass a bit of cheese rind thrice round the wart "and tell nobody." Another consists in wetting it with the tongue, with a formula which varies; while exposing it to the full moon, with traditional rhymes, may also be used as a cure. That sprains may be cured by a nine-times knotted woolen thread—be particular that it is woolen, and at the same time that a rhyme is chanted—passed round the seat of the ailment, is firmly believed in. The potato, simply carried in the pocket and never forgotten, is a remedy for rheumatism; nay, more, is a prophylactic charm against it. And who would suffer from gout if the wearing of a dried cuttle-fish, picked up on a Tuesday, would charm the malady away? Some practitioners in the family sorcery line there are who, on receipt of a lock of hair from the patient, can not only diagnose immediately the complaint, but, returning it

wrapped in paper, not to be opened but worn next the skin, can thereby cure it. For fever and ague a most potent charm of the utmost respectability and antiquity exists, which has the advantage, like some patent medicines, of "not requiring the patient to alter in any way his usual habits or diet." It consists in writing the potent word "Abracadabra" several times in the shape of a triangle on a piece of white paper, then folding up the same—this being most important—so as to conceal the writing. This must then be stitched in the shape of a cross with white thread, and must be attached to a white ribbon. This must for nine days, neither more nor less, be suspended round the neck, and, at the end of that time, thrown, in perfect silence, at sunrise into a stream which flows eastward. All these preliminary matters having been duly attended to, you have an unfailing "cure for fever, quartan or semitertian ague." Much simpler is the remedy for hydrophobia, which the adherents of the Pasteur system may well envy for the lack of trouble, risk, and elaboration which distinguishes it. It is not generally known, and, at any rate, was held in high favor as late as the year after Culloden. You pluck out the tail feathers from a live cock until the bird is bare—a black and white one is the most efficacious—and wave them over the bitten part. They are then applied to it. On this the hydrophobia is removed from the patient into the cock. Nay, more, not only is it a remedy, but a method of discerning when, happily, the fear of this terrible malady may be unfounded; for the cock (not the dog, by the way) is carefully watched, and on his symptoms a correct notion can be arrived at as to the matter.

A charm against headache consists in waving a double plantain leaf, gathered when the new moon is just seen, before the brow, at the same time counting one hundred. The new moon, indeed, has a good many things accredited to it; but one thing every invalid should avoid most sedulously—and that is, seeing it for the first time through a closed window. Those, therefore, who suffer from anything in the shape of a cold should, it is presumed, carefully draw their curtains till such time as the window can be opened. The cramp-bone is sufficiently well known as a remedy for that usually nocturnal and always painful experience. But the cabbage leaf is equally familiar. Gathered at noon, and from the earliest plant in the garden, and wrapped in red flannel, then suspended to the sufferer's head, with the adjuration:

> "Cramp, cramp, go away,
> O'er the cabbage hold thy sway!"

who knows what happy result may not ensue? But you must not take the leaf out of the flannel, nor must you remove it from the bed at any time, whatever objections the tidiest of housemaids may make. Lastly, we may mention—devoutly hoping, in view of the bird slaughter that fashion has fashioned, that the custom is now more honored in the breach than the observance—the charm against ague, which consists in shooting a swallow and hanging it up in the chimney. This is, however, a charm which works in two ways, for in Scandinavia such an act is considered as a bad omen.*

AN EARLY AND POSITIVE CLINICAL METHOD FOR DIAGNOSING THE PRESENCE OF DIPHTHERIA.

The University Medical Magazine, Jan., 1892, calls attention editorially to this method, quoting the contributions to the determination of the Löffler bacilli by Fischer, reported in the New York Medical Record, Dec. 6th, 1891, and described by Baginsky in the Archiv für Kinderheilkunde.

In view of the importance to the general practitioner of definite knowledge on this subject, that he may determine the diagnosis of doubtful cases of diphtheria, we reproduce the methods described:

According to Fischer, all that is needed are a pair of sterilized scissors, a pair of sterilized forceps, a sterilized test-tube, six to eight agar-tubes, and an incubator or brood-oven. The patient must be placed in a good light, and, if restless, the mouth must be held open with a gag. Then a small portion of the pseudo-membrane is cut off, after having been seized with the forceps. A very small piece, the size of a pin-head, is large

*The writer is indebted to an anonymous antiquarian who affords these facts in a London evening daily.

enough to make a stroke-culture on agar or blood-serum which has solidified in an oblique position. This is then placed in the incubator. Although the ordinary temperature is sufficient to develop the pathogenic bacteria, as it is important to develop the bacilli as speedily as possible, it is better to put the agar-tubes into the oven at a temperature of 70° to 107° F. Twelve hours are often long enough to develop cultures sufficiently to determine a diagnosis; more usually eighteen to twenty-four hours are required. These colonies can, if the microscopical examination is not satisfactory, be immediately examined in the hanging drop, which is easily made by mixing a drop of sterilized water with a very small quantity of a colony removed by means of a platinum-pointed needle and placed on a cover-glass, where it can be examined microscopically. The edges of the concavity of the glass-slide are smeared with vaseline, and the slide is inverted over the drop; the cover-glass sticks to the smeared slide, which, when turned over, holds the drop in the depression covered by the cover-glass, thus forming an easily-made, air-tight cell from which the drop cannot evaporate. A drop of the oil of cedar being placed on the cover-glass, and the narrow blender shutting off the Abbé condenser, the specimen is ready for microscopical examination. Or a very small part of a colony can be placed on a cover-glass, allowed to dry thoroughly, and then stained with ordinary methylene-blue staining and examined with Canada balsam.

The colonies grow on blood-serum, and are large, round, elevated, and grayish-white, with a centre more opaque than the slightly irregular periphery. The surface at first is moist, and after a day or two it becomes dry. The bacilli grow faster on blood-serum than do other micro-organisms found in connection with them. Microscopically the Löffler bacilli have the appearance of small slightly-curved rods, about as long as the tubercle bacilli and twice as broad. They do not possess any movement, do not liquefy gelatin, have no spores, and at times are swollen at the ends. They are found most readily in the oldest portion of the pseudo-membrane. Another bacillus, resembling morphologically and in the culture the Löffler bacillus, has occasionally been found in the mouth and pharynx, but, however, it is not virulent. It has been called the pseudo-diphtheritic bacillus. The differentiation is claimed by Fischer to be easy, as the reaction of alkaline bouillon is not changed by the pseudo-diphtheritic bacillus, whereas in the presence of the real diphtheritic bacillus the reaction is changed to acid. Whether this pseudo-diphtheritic bacillus is an accidental micro-organism found occasionally in conjunction with the true baccillus, or whether it is an attenuated form of the pathogenic germ, is not fully determined. Probably the latter supposition is correct. Fortunately for the diagnosis of the true bacillus, the pseudo form is only found rarely.

For this method to be adapted to the use of the general practitioner, it would be well if there could be established in connection with every hospital a bacteriological laboratory, no matter how small, to which every physician should have access, or wherein all necessary appliances should be placed at the disposition of the profession in general, or where work would be done under the supervision of an experienced worker for a trifling cost.

STANDARDIZATION IN THE NEW PHARMACOPŒIA.

From an article published in a late issue of the Journal of the American Medical Association, by Dr. F. E. Stewart, we learn that although the convention for the revision of that important work failed to decide upon the matter of standardization, leaving it to the proper committee, Messrs. Parke, Davis & Co. have placed at the disposal of the subcommittee all their work in relation to the standard galenical products which they have placed on the market under the name of "Normal Liquids." It is to be hoped that this matter will receive due attention at the hands of the committee, for we have the best evidence in clinical experience of the superior value of these preparations. The physician in his quest for reliable medication will not go astray in selecting these products for his patients, but he will have to be very cautious how he uses them indiscriminately with those haphazard extracts to which he has so long been accustomed.—*Medical Summary*, December, 1891.

Book Notices.

THE COSMOPOLITAN EDITORIAL STAFF FOR 1892.

The announcement that Mr. Howells will leave Harper's Magazine, to take editorial charge of the Cosmopolitan, on March 1st, calls attention to the process of building up the staff of a great magazine. Probably in no monthly has the evolution been so distinctly under the eyes of the public as in the case of the Cosmopolitan. The first step after its editorial control was assumed by Mr. John Brisben Walker, was to add to it Edward Everett Hale, who took charge of a department called "Social Problems," subjects concerning which the greatest number of people are thinking to-day. Mr. Hale, who is a student, a fair-minded man, a thorough American and a man of broad sympathies, has filled this position in a way to attract the attention not only of this country, but of leading European journals. Some months later, a department was established called "The Review of Current Events." To take charge of this, a man was needed who should be familiar not only with the great events of the past thirty years, but who knew personally the leading men of both the United States and Europe who could interpret motives and policies. Murat Halstead accepted this position with the distinct understanding that his monthly review should be philosophical and never partisan. The next step in the history of the Cosmopolitan, was the placing of the review of the intellectual movement of the month in the hands of Mr. Brander Matthews, who for some time has been recognized as one of the two or three ablest critics in the United States.

Finally came the acceptance of the editorship, conjointly with Mr. Walker, by Mr. Wm. Dean Howells. Mr. Howells, who is recognized universally as the foremost American of letters, upon the expiration of his contract with Harper Brothers, on the first of March will take in hand the destinies of a magazine which promises to exercise a share of influence with the reading classes of the United States. His entire services will be given to the Cosmopolitan, and everything he writes will appear in that magazine during the continuance of his editorship.

ESSENTIALS OF NERVOUS DISEASES AND INSANITY; THEIR SYMPTOMS AND TREATMENT. A manual for students and practitioners. By John C. Shaw, M. D. 194 pages and 48 original illustrations. Price $1. Published by W. B. Saunders, 913 Walnut Street, Philadelphia. 1892.

Anatomical detail and physiological discussion are forbidden by the exigencies of space, and this little work claims to occupy a place, not in the stead of the larger and more complete works on the same subject, but in conjunction therewith. It is a practical hand-book for advanced students, and its usefulness is greatly enhanced by the references to the writings of leading neurologists which are appended at the close of many of the sections of the work. The illustrations, while not particularly artistic, are clear and self-explanatory.

THE PHYSICIAN AS A BUSINESS MAN; or, How to Obtain the Best Financial Results in the Practice of Medicine. By J. J. Taylor, D.D. 143 pages. Published by the Medical World, 1520 Chestnut Philadelphia. 1891.

The physician as a rule is a poor financier, and too often does the designing patient turn to his own profit this weakness of his doctor. Considering the capital of money, training and scientific culture involved, few investments pay poorer dividends proportionately than does the average doctor's practice. To the relief of such Dr. Taylor comes in this little book, in which he outlines a practical business policy for physicians. He lays particular stress on the need of closer relations between practitioners, looking to co-operation.

TOWN TOPICS.

A newsy, witty and most entertaining paper; an outspoken critic and chronicle of the events, doings, interests, and tastes of the fashionable world, carrying with it the atmosphere of the metropolis; devoted to refined humor; caustic comment; piquancy of jest; short stories; musical, dramatic, literary, and art criticism and topical sketches.

Regular subscriptions may be sent direct to office of publication, or through any newsdealer or subscription agency: One year, $4; six months, $2.50; three months, $1.30.

Samples free by addressing the publisher, 21 West 23d street, New York City, N. Y.

MANUAL OF PHYSICAL DIAGNOSIS, for the Use of Students and Physicians. By James Tyson, M.D. Illustrated. 136 pages. Price: 12mo., cloth, $1.50. Published by P. Blakiston, Son & Company, 1012 Walnut street, Philadelphia. 1891.

Dr. Tyson is well qualified by his large experience in the teaching of physical diagnosis, as professor of clinical medicine in the University of Pennsylvania, for the work of compiling a text-book that shall be of special value to students. He has succeeded in being concise and at the same time sufficient, and his little book is doubtless destined to very general use in medical classes.

THE PRACTICE OF HYPNOTIC SUGGESTION, by Geo. C. Kingsbury, M. A., M. D.; and A PRACTICAL MANUAL OF THE BACTERIOLOGICAL ANALYSIS OF WATER, by Dr. Miquel. Published by William Wood & Company, New York.

These two treatises combine to make up the November issue in the series of Wood's Medical and Surgical Monographs. Dr. Kingsbury's exhaustive handling of hypnotic phenomena is fully as interesting to the lay as to the professional mind, while Dr. Miquel's chapters on the bacteriological analysis of water present an imposing array of facts and figures that are at once well-arranged and valuable.

SAUNDERS' POCKET MEDICAL FORMULARY; WITH APPENDIX. By William M. Powell, M. D. Price: Tucks, $1.75; cloth, $1.50.

This well-known and popular compilation, the practically indispensable vade-mecum of the physician, is thoroughly up to date in the present issue. As far as possible the more important of the recently discovered drugs figure in the many prescriptions contained in its pages.

VISITING LISTS.

To award the palm as between the Visiting Lists for 1892 issued by Lea, Brothers & Company, Philadelphia, and J. H. Chambers & Company, of St. Louis, is a hard matter. In neatness of form and convenience of arrangement both are excellent.

Notes and News.

La Grippe.—

Just the same,
'Cept in name,
As that other diabolic, pathogenic and prodromic, mucous-quirking, topknot-wracking, jointlet-cracking, stomach-working, body-burning, brainpan-murking, nerves all churning affliction which is called—
Or by æsthetic people bawled—
The "influenza;" but for short
When with cold in head you snort
And your temper's on the snip
It's just ordinary "grip."
And its metabolic
Worse than colic
Poison's in your blood,
And you wish your name was mud,
Until in sullen fury you let everything just rip—
While in doleful chorus groaning
Your family are moaning
In a sort of runic rhyme
With their vitiated chyme
The solo of the grip.
Not the pip,
But the grip, grip, grip—
From its talons you can't slip,
But must sit and in your person
(For all its woes a curse on)
Exemplify its rule;
And every one's a fool
When the whisky bottle's drip
And the quinine mixed you sip
And pay out pelf
To rid yourself
Of that all-affecting
Nought-delecting
Old-world rip,
The grip.

—*Philadelphia Press.*

The Functions of Medically Trained Men.—

In a paper on this subject Surgeon-Major Evatt, of the Army Medical Staff, sketches out some of the changes in the functions of medically trained men, which in his opinion must logically result from the spread of sanitary science and the fuller study of *preventive* as opposed to *curative* medicine. Dr. Evatt says that the true, active and male side of the physician's duty is the maintenance of health and the prevention of disease, and not only the female or passive side of curing the sick. This being so, and apart from the question of self-interest or the necessity for bread-winning, he maintains that enormous gains may result to human life and

human happiness in this world if medical men will boldly enter on the executive side of human affairs and take their full share in citizenship and in bearing their part in the burden of active life more than has hitherto been the case. "To every physician who reads this paper," says Dr. Evatt, "new forms and new phases of the central theme will present themselves; that theme is that we are, as physicians, bound to fit ourselves for, and to claim absolute authority and full directing power in, every human organization in which we take a part. To omit to do so is to be a traitor to human life, and to shirk our full duty in the battle for existence."—*Lancet*, Dec. 5th, 1891.

Doctors in the Legislature.—

"In no European legislature," says The Lancet, "are there so many distinguished surgeons and physicians as in that of Italy. One of the best of her prime ministers was the 'general practitioner' of Casella in Piedmont, Giovanni Lanza, under whose wise and well-timed policy she transferred her capital from Florence to Rome, while statesmen of Cabinet rank in nearly every administration have been drawn from her men of light and leading in medicine, prominent among whom may be mentioned one of her ablest Ministers of Public Instruction, Dr. Guido Baccelli. Nearly every year she adds to the number of her senators one or more of her chief professors of the healing art, the latest accession to these 'Patres Conscripti' being Dr. Enrico Bottini, who holds the Chair of Obstetrics at Novara. Professor Bottini was for some time Lecturer in Clinical Medicine at the University of Pavia, where he gave such proof of general as well as special ability that he was elected Deputy to the Italian Chamber. From there he has been raised to the senate."—*Medical Record*, Dec. 26th, 1891.

A Case of Defecation Per Orem.—

At a recent meeting of the Paris Hospitals Medical Society, M. Desnos, one of the physicians of La Charité, gave the particulars of a singular case, in which, for upwards of two years, defecation had regularly taken place through the mouth, and never by the normal channel. The subject of this perverted function was an epileptic young man, who had escaped from an asylum in the suburbs, and had been brought to the hospital owing to an epileptic seizure. M. Desnos was inclined to regard these attacks as of hysterical nature, and when after one of them indications of fæcal matter were found on his clothes, alleged to have come from the mouth, strict watch was kept upon him to detect any imposture. The patient—who had made the above statement as to his habit of defecation—was therefore guarded, and on two occasions during his brief stay in La Charité, the evacuation *per orem* took place in the presence of competent witnesses. At the next meeting M. Labbé said that when he was interne, under M. Briquet, in 1857, he had observed a similar case in a hysterical and cataleptic subject, who vomited not only all ingesta, but also enemata. The patient was strictly watched, and it was inferred that the ileo-cæcal valve was incompetent. In this case the fæcal material was not formed, but always of liquid character.—*Lancet*, Dec. 19th, 1891.

The Association of Military Surgeons of the National Guard of the United States.—

The second annual session of the Association of Military Surgeons of the National Guard of the United States will be held at St. Louis, April 19th, 20th and 21st, 1892. An interesting programme of addresses by prominent surgeons of the National Guard and the United States Army has been arranged, and a goodly number of scientific papers on Military and Accidental Surgery will be read and discussed, and all matters pertaining to the health, usefulness and welfare of the civilian soldiers will receive attention.

The Committee of Arrangements have received the assurance that transportation will be satisfactorily reduced on all railroads and steam boats to and from this meeting. The several hotels have promised a low and uniform rate, which will be announced at an early date.

Is There a Prostate?—

Dr. J. A. Fort, in Revue Chirurg. des Mals de Voiées Urin., denies the existence of a special

organ known as the prostate. What is commonly termed the prostate is, in his opinion, simply a collection of urethral follicles, differing in no wise in function from the glands in the vicinity. The disease described generally as a prostatitis is a posterior urethritis which has invaded the urethral glands. Patients suffering from prostatic trouble suffer from a special variety of chronic posterior urethritis, attended with inflammation of the neck of the bladder.

A New Method of Measuring the Capacity of the Stomach.—

At the recent Italian Medical Congress, Forlanini (Rif. Med., October 24th, 1891) proposed a new method of ascertaining the presence of dilatation of the stomach. He passes an œsophageal sound into the stomach, and by its means distends the organ with air, in no case using a pressure of more than 7 or 8 centimetres of water; the air is then withdrawn by means of an aspirator, and its volume ascertained. By always using the same amount of pressure when injecting, the effects of any treatment on dilatation of the stomach can easily be ascertained.

American Concentrated Foods Obtain the Diploma of Honor at the International Exhibition for Food Products.—

In the exhibition number of the Zeitschrift für Nahrungsmittel-Untersuchung und Hygiene, the official report is published concerning the "International Exhibition for Food Products and Domestic Supplies, from the Hygienic Point of View." The diploma of honor of the first grade, with special mention, was accorded to the Mosquera-Julia Food Co., of Detroit, for their Mosquera's Beef Meal, Beef Cacao, and Beef Jelly.

The Brain of the Dynamiter.—

The brain of the dynamiter who was blown to pieces in trying to coerce two millions out of Russell Sage has been examined, and declared to show evidences of insanity. The weight of the entire brain was 1,210 grammes, which is about two hundred grammes, or six ounces, below the average. Although not positively diseased, the convolutions of the cerebrum were undersized, and the sulci were shallow.

Therapeutic Brevities.

Peroxide of Hydrogen in the Treatment of Puriform Cavities and Fistula.—Dr. H. Graff, a military surgeon of Christiania, publishes in the Norsk Magazine the result of his experience of peroxide of hydrogen in the treatment of abscesses which do not admit of being laid completely open so as to subject them to antiseptic treatment, and of fistulous sinuses offering the same difficulty. The author recommends, in preference to all other antiseptic fluids, irrigation with a fifteen-volume solution of peroxide of hydrogen, which he employed with the greatest success at the Royal Hospital of Christiania. The great development of gas which takes place in consequence of the decomposition of the peroxide when coming in contact with blood or pus removes the pus very effectually. The irrigation, followed by proper antiseptic dressing, causes a considerable decrease of the discharge, and healing takes place in a remarkably short time. In the case of cachectic patients, when granulation is slow, Dr. Graff recommends that the irrigation should be occasionally changed for injections of equal parts of balsam of Peru and ether. The treatment is especially valuable in cases of indurated wounds with puriform cavities. It is, of course, necessary to make due provision for rapid and free drainage, as the development of much gas may otherwise produce serious pressure.

Chromic Acid in the Treatment of Cysts.—W. R. H. Stewart, F. R. C. S., in the London Lancet, reports the treatment with chromic acid of three cases of ranula and seven of cystic goitre with satisfactory results.

Of the three cases of ranula all had large cysts. A portion of the cyst was cut away, and the contents washed out. A saturated solution of chromic acid was then freely applied with a chromic acid carrier to several points of the cyst wall. At the end of the week, the cavity having much diminished, the acid was again applied, and in from a fortnight to three weeks the wound had healed and all signs of the tumor had disappeared.

In the seven cases of cystic goitre the tumors were tapped in the usual manner and the contents washed out. After all hæmorrhage had ceased, the saturated chromic acid solution was applied with a carrier through the cannula to the walls of the cyst, in the same manner as with the ranulas. Six of the seven cases healed rapidly after from two to three applications.

The Care of the Mouth.—In a recently published work, Dr. Thomas, a German physician, calls attention to the great prophylactic value of buccal cleanliness. The best dentifrice, he says, is soap, which dissolves the mucus and removes it from between the teeth more thoroughly than any other substance. After a careful brushing with soap or with the tincture of soap-bark (quillaya saponaria), some antiseptic should be used. The most efficient antiseptics for this purpose, either of which is capable of destroying the micro-organism in one minute, are thymol, 1 to 25,000, and corrosive sublimate, 1 to 5,000. The following is recommended as a useful and pleasant buccal disinfectant:

℞ Thymol, gr. iij.
Benzoic acid, gr. xl.
Tincture of eucalyptus, ʒ iij.
Essence of peppermint, ♏x.
Alcohol, ʒ iij.

M. Sig.—Pour enough in a glass of water to render it turbid and use as a mouth wash.

—*Medical Record.*

A New Method of Tenotomy.—The following are the steps of an operation which was performed in a case of post-hemiplegic contracture of the flexors of the fingers, by W. W. Keen, of Philadelphia. An incision was made, beginning just above the pisiform bone, and extending three inches obliquely upwards, its upper end being over the tendon of the flexor carpi radialis. All the flexor tendons having been exposed, each tendon was first split along the middle for an extent of one inch and a quarter, and then, at the two ends of this incision, section of the opposite halves of the tendons was made; that is to say, the radial half of the tendon was divided at one end of the vertical slit, and the ulnar half at the other end. The long, loose ends of the divided tendon were then made to glide on each other in a vertical direction over a distance of about half an inch, and sewn together by two transverse sutures. The tendon was thus lengthened to the extent of three-quarters of an inch.

An Italian Remedy for Phthisis.—Monochloraphenol, which was prepared by Signor Tacchini, a chemist in Pavia, has been employed in the treatment of phthisis by Dr. Passerini, of Casate-Nuovo, with great success. It is used as an inhalation, and, being a powerful antiseptic like trichlorophenol, but much less irritating, and being besides exceedingly volatile, it is capable of penetrating deeply into the lungs, and it is thought that it may act directly on the tuberculous foci themselves. These inhalations may be continued for a long period, and are said to cause the bacilli to diminish and even to disappear from the sputa, and to occasion a most marked improvement in the symptoms. In five cases of an early stage of phthisis complete recovery is said to have ensued after two months' treatment, and no recurrence to have taken place in the six months that have subsequently elapsed.—London *Lancet*, Dec. 19th, 1891.

Jaborandi in Urticaria and Gonorrhœal Rheumatism.—C. Heaton, M. D., in Cincinnati Lancet and Clinic, December 19th, 1891, says: I have not, for the past ten years, used any other remedy than jaborandi for this affection. I give one-half teaspoonful of the fluid extract every half hour until four doses are taken, or until free perspiration or salivation is induced. I usually direct it to be given in the evening, and instruct the patient to avoid exposure to cold while taking it and for thirty-six hours afterward. If necessary, repeat in same way in twenty-four hours. I have in no case had to repeat doses more than once to effect a cure.

I have also found jaborandi given in the same way a most excellent remedy in gonorrhœal rheumatism, when given in the beginning.

A Folk-lore Remedy for Whooping-Cough.—Dr. E. V. Hunt writes to The Lancet that while staying at Folkestone recently he got into conversation on whooping-cough, one day, with a bath-chairman. The man said that he knew of a certain cure for this complaint, which was to cut some hair from the nape of the child's neck, put the hair between two pieces of bread and butter, and make a dog eat it. He said the dog caught the whooping-cough, and probably died of it, but the child recovered. On rather strong doubts on the point being expressed by the listener, he asserted it was positively true, for it had proved a cure in the case of his own children.

A New Analgesic and Anti-Rheumatic Remedy: Salicylanide.—Dr. Nesbitt (La Semaine Médicale) has experimented with salicylanide and found it to have the advantages over salicylic acid of being more soluble in cold water, insipid, and of acting more energetically in a smaller dose. The writer administered 10 centigrammes (1½ grains) every hour, or 25 centigrammes (4 grains) every

three hours. The maximum quantity in twenty-four hours should not be more than one gramme (15 grains). This remedy has been found of great service in many painful diseases—oöphoralgia, migraine—as well as in acute tonsillitis and chronic rheumatism.

Guarana in Leucorrhœa.—A contributor to the Medical Summary reports the following case of leucorrhœa: Prescribed guarana internally, and as a local application (after cleansing vagina with castile soap and warm water).

℞ Salicylic acid, gr. xx.
Glycerin, ʒ j.
M.

After a few days patient reported improving; after a few weeks I met her, and in a happy mood she informed me she was well, her health being better than she had known for a long time before.

Pilocarpine as a Remedy for Rabies.—In the November number of the Indian Medical Gazette, Assistant Surgeon Troylucko Nath Ghose gives an account of supposed rabies in which recovery followed the use of eleven subcutaneous injections of pilocarpine hydrochloride of a fifth of a grain each, in the course of seven days. The author remarks that in the course of his 25 years of practice he has seen probably not fewer than twenty cases of rabies, but has never before succeeded in curing one, and he adds that he has never known of a recovery from the disease in India.

Benzoate of Mercury for Buboes.—Dr. Nelander claims to have had excellent results in the treatment of buboes by the injection of benzoate of mercury (Archiv. für Dermatologie und Syphilis, No. 3, 1891). In those cases which are not too far advanced he succeeds nearly always in preventing suppuration, and even when moderate fluctuation is present it is often possible to promote absorption by these injections, and thus do away with the necessity of an incision.

A New Heart Tonic.—A heart tonic, resembling digitalis, is the tincture of coronilla varia, recommended by Dr. Poulet, of Planches-les-Mines; and tincture of coronilla scorpioides, recommended by MM. Spillmann and Haushalter.

A New Hypnotic.—Trional is said by Schultze to be a good hypnotic in doses of one to three grammes.

Medical Progress.

A New Method for the Administration of the Iodide of Potassium.—The irritating effects of iodide of potassium upon the stomach, and the difficulty of administering it in large doses in many cases in which it is necessary to bring the system rapidly under its influence, are well known, and have been the occasion of numerous efforts to correct these disadvantages.

The ends to be gained in giving the iodide are (*a*) thoroughness and rapidity of assimilation, (*b*) administering it in such a manner as to render it unirritating, and (*c*) sustaining the patient's nutrition during the period of its administration.

To meet these requirements it has been suggested that the dose for twenty-four hours be subdivided into a number of small portions, to be given six, eight, or even twelve times per diem, instead of in the usual triple dose. In order to aid its assimilation it has been given in solution with wine of pepsin as a menstruum, and, for the above purpose also, and to render it unirritating, as well as to secure to the patient a certain amount of nutriment, the excellent device has been practiced of giving it in milk. It has also been given hypodermatically, and by the rectum, and is often prescribed to be taken in Vichy water. Of the above methods, those in which wine of pepsin and milk are employed are the best; indeed, the latter marked a distinct advance in the use of the drug, and has proved to be exceedingly valuable, disguising to some extent the taste of the iodide, causing it to be less irritating, and affording with each dose a small but desirable amount of food. The substitution of the article known as "matzoon" in the place of milk is often advantageous, and an improvement upon the latter.

The writer has had opportunities of studying many cases of active tertiary disease of the thorax, and has experimented with various methods for the purpose of overcoming in such subjects the following common difficulties, namely, pain and difficulty in swallowing, gastric irritation, faulty assimilation of the iodide, loss of appetite, and distaste for food, and finally, general depression from lack of nourishment; and has found that all of the desired indications may be most satisfactorily met by an exceedingly simple device.

If pepsin be added to warmed milk the result is the well-known article "junket," "rennet custard," or "rennet curd," the pepsin acting upon the milk as a digestive, and

causing it to curdle and to form a delicate, jelly-like mass, which is attractive to the eye, palatable to the taste, more easily swallowed than anything, perhaps, but an oyster, and remarkably easy of digestion and assimilation. This curd forms an admirable vehicle for the administration of the iodide, and in the proportion of ten grains of the iodide to four ounces of milk effectually disguises the taste of the salt. If a stimulant be required, a little sherry wine may be added. The iodide should be used in a saturated solution with water, one drop of which equals one grain of the drug. Any good pepsin may be employed; that which the writer has found most effective in its prompt and thorough action upon the milk, and most agreeable to the taste, is the so-called "Fairchild's esence of pepsin."

To administer a five-grain dose of the iodide, place five drops of the saturated solution of the iodide in the bottom of a small tumbler, with fifteen drops of essence of pepsin, and if desired, a teaspoonful of sherry; upon this pour two ounces of warm milk, and set away in a cool place. The milk must not be too hot, or otherwise the digestive properties of the pepsin will be destroyed. Coagulation soon takes place, and the mixture is then ready for use.

For the general convenience of the patient the following formula may be dispensed:

℞ Potass. iodid. (sat. sol.), 160 grains.
Essence of pepsin, ℥ j.
Sherry wine, q.s. ad ℥ iv.
M. Sig.: ℥ j in four tablespoonfuls of milk, according to directions.

While this method may not be necessary in many simple cases, there are, nevertheless, a very considerable number in which it may be employed, and in which it will be found to fill the required conditions better than any other now in use.—D. Bryson Delavan, M.D., in *N. Y. Med. Record.*

A Medico-Legal Aspect to Pelvic Inflammation.—Dr. W. M. Patton, of Buffalo, recently read a paper on this subject in which he said pelvic inflammations in women have been discussed from almost every point of view excepting the one he had chosen. He based his paper on a case whose history may be epitomized as follows:

A young married woman, pregnant, fell into a shallow street excavation, was immediately helped out, and walked home. In about a fortnight she suffered pain and called a physician, who diagnosticated general peritonitis. She had several recurrent attacks prior to her confinement, which occurred about three months after the alleged fall, when she was delivered by forceps of a still-born child. A few weeks after accouchement she was seized with pain in the right hip-joint, which was finally diagnosticated and treated as coxitis. The right extremity was placed in an extension splint, where it was kept for a period of two or three months, when she was declared cured. A suit for damages was entered against the city and paving contractors, and several experts were invited by the counsel on both sides to examine the patient. On the side of the prosecution it was held that the woman's suffering was due entirely to the alleged fall, while the defense alleged that her condition was due to circumstances entirely independent of any injury; that she had suffered from recurrent pelvic inflammation, that there was no hip-joint disease and never had been, and that she was not entitled to damages on that ground. A verdict was given for a nominal sum. The case was appealed.

The author called attention to the fact that reflexes pertaining to the disease of the pelvic organs were very common, and especially were they prone to manifest themselves in the larger joints, notably the hip and knee. This might reasonably be expected when the intimate nerve communication between the pelvic organs and hip-joint was recalled. These reflexes had often been treated instead of the disease itself, and had been called neuralgia, rheumatism and various other names. The author cited a paper by Dr. R. H. Sayre, in which he referred to the fact that many such cases had been treated for genuine Potts' disease, with corsets and braces, that were afterward ascertained to be due to disease of the pelvic organs, with spinal reflexes simulating Potts' disease.

He emphasized the points of his paper as follows:

1. The intimate anatomical relations between the pelvic organs and the larger joints, especially the hip and knee-joints, render them liable to reflexes.

2. The importance of careful primary diagnosis lest grave errors, and possibly disastrous consequences, may result from misdirected treatment.

3. The medico-legal bearing that errors of judgment in diagnosis and treatment may have in relation to the patient, as well as upon the reputation of the physician.

The Treatment of Neurasthenia.—Dr. Petrina states that we have two objects to fulfil in the treatment of this condition—

first, to remove the abnormal excitability, and second, to stimulate the weakened innervation. An important part is played by the nutrition. In general a mixed, easily digested diet, with regular times of taking meals, is preferable to a rigidly fixed dietary, and individual idiosyncrasies must be respected. Beer, wine, tea, coffee and tobacco may be allowed in small quantities. Residence in the country is frequently sufficient to effect a cure; in severe cases a change of climate is indicated. A sea climate is indicated in cases of vigorous persons who have become exhausted from great mental exertion. On the other hand, very debilitated and excitable neurasthenics do badly in sea-air, for experience has shown that the sleeplessness and excitability are increased. For the majority of neurasthenics the climate of high altitudes is most suitable, and should always be first tried. The home treatment of neurasthenia is less effective, but also gives good results. It consists of psychical influences, hydrotherapy, electricity, gymnastics, massage, regulation of the diet, work and sleep. The hydropathic measures comprise the rubbing wet-pack or simple wet-pack, the full or sitz bath. The rubbing wet-pack should not have too low a temperature, nor be too prolonged. Cold river baths are frequently well borne even by delicate neurasthenics. The electrotherapy may consist of general faradization, the electric battery, and the local application of the galvanic current. Massage in conjunction with gymnastic exercises is of value; for young neurasthenics riding, fencing, swimming, etc., are indicated. The employment of digitalis for cardiac disturbances, of opium for gastro-intestinal pains, and of strong purgatives for the obstinate constipation which usually exists, requires the utmost caution. The application of an ice-bag over the heart, galvanization of the neck along the sympathetic, together with administration of bromides and the maintenance of rest, act as good cardiac sedatives, and enable us to dispense with digitalis. The use of a Priessnitz compress over the abdomen is serviceable, and constipation may be relieved by enemata. The dyspeptic symptoms may be relieved by drinking the lukewarm waters of Carlsbad, Mühl or Schlossbrunnen, to which, if necessary, some Carlsbad salts may be added.—*Therapeut. Monatschrift.*

A New Method of Establishing a Gastric Fistula.—Dr. Witzel, of Bonn, describes a recently devised modification of the technique of gastrostomy, which, it is asserted, will prevent the escape of gastric juice, which in many instances causes so much trouble after this operation. The object of this procedure is to establish a canal, formed by stitching together the free borders of two parallel folds of the exposed wall of the stomach. This canal extends obliquely from the right downward and to the left, where it communicates with a small opening made into the interior of the stomach, and an arrangement is thus established which resembles the lower extremity of the ureter as it passes obliquely through the wall of the bladder. It is necessary, in practising this method, to draw a large extent of the anterior wall of the stomach through the external wound. This, it is stated, can be readily effected, when the stomach is collapsed, by gentle and prolonged traction. Two parallel folds following the above mentioned course are taken up, the free margins of which are brought together by three or four Lembert sutures, and by numerous ordinary sutures, over a flexible tube of the thickness of a lead-pencil, the lower end of which tube is inserted into the small opening made into the stomach, while the upper end is intended to project from the external wound. The canal thus formed, which should be about one and a half inches in length, is left exposed at the bottom of the wound when the stomach is fixed by sutures to the margins of the external incision. This modification does not necessitate any change in the other steps of the operation, and the surgeon can make the external wound according to his usual practice. Witzel exposes the sheath of the rectus by an incision made parallel to, and at a distance of a finger's-breadth from, the margin of the ribs; then, as is done in House's operation, he separates the fibres of this muscle in a vertical direction, and incises the transversalis obliquely from above downward and from the right to the left. The division of the rectus thus crosses the wounds made through the skin and the transversalis. Witzel, who has operated in the manner described on two patients, has had good reason, he states, for being well satisfied with the results, and believes that his expectation of establishing a gastric fistula capable of being effectually closed by valvular action has been fulfilled. —*Centralblatt für Chirurgie.*

The Chian Turpentine Treatment of Cancer.—As it was found that the turpentine in the pill form was not well digested, the latest recommendation of Professor Clay is to administer it in an emulsion made as

follows: One ounce of the Chian turpentine is to be dissolved in two ounces of pure sulphuric ether. This solution has been termed the turpentine essence, and the emulsion is made by adding one ounce of this essence to a mucilage of acacia (one ounce and a half of powdered gum arabic to nine ounces of water), making a ten-ounce mixture, a teaspoonful of which contains about three grains of the drug. In some cases resorcin has been added in doses of a grain. This emulsion is not of a disagreeable taste.

Tonics have been used, in addition, when indicated. In some instances local applications have been made; in others, this internal remedy alone has been employed. When it has been taken about three months it should be omitted three days in every fortnight. The sulphur is often given in a separate pill, especially in cancer of the uterus and rectum. Professor Clay claims to have made a number of complete cures, not only of uterine cancer in advanced stage, but also of cancer of the rectum and surface epitheliomata. In cancer of the breast he reports marked improvement of symptoms and complete arrest of the new growth. No report has yet been published, stating the precise changes in the tumor, but he maintains that the primary action is upon the periphery of the growth. My own experience is still too limited to be of much value. Several patients at the Skin and Cancer Hospital have been under the treatment from one to six and eight months. All take the remedy well, by giving them a brief rest occasionally. A cancer of the uterus has been greatly benefited, pain has decreased, hæmorrhage has ceased, and granulations have become healthy. A large epithelioma of the face has decidedly changed in character. In some no effect whatever has yet been noted.—Dr. Daniel Lewis in *N. Y. Med. Jour.*

Urethroscopy in the Diagnosis of Gonorrhœa in the Male.—Samuel Alexander, in the Journal of Cutaneous and Genito-Urinary Diseases, describes the use of the urethroscope in the diagnosis of gonorrhœa. It is an aid to diagnosis and not the sole means. It gives us information principally as to the appearance of the surface of the mucous membrane of the urethra, whether it is granular, ulcerated, or simply congested. The condition of the urethral follicles is also determined. If stricture is present the condition at the point of constriction can be determined. The introduction of a urethroscope during the acute stage of a urethritis will cause harm also if it be unskilfully managed, even in chronic cases. It should not be employed until the inflammation has been localized. A tube the size of 20 F. at least must be employed, and in cases where there has been a recent urethrocystitis or an epididymitis the urethroscope should be used with great caution in the posterior urethra. It should be introduced into the membranous urethra even when the disease is supposed to be confined to the anterior part. The principal changes produced by a urethritis are: (1) Changes in shape and length of the visible funnel due to infiltration; (2) lack of lustre and cloudiness of the mucous membrane as the result of destruction of epithelium; (3) changes of color, it being bright red from active hyperæmia, or purplish from passive congestion; (4) the presence of granulations; (5) erosions and true ulcerations. These changes are often slight and only discoverable after practice. After prolonged inflammation congested areas may remain, which are not to be regarded as constituting disease. By the urethroscope we may also see the effect of local applications.

An Improved Method of Performing Artificial Forcible Respiration, with Exhibition of Instruments.—In a paper by Dr. J. O'Dwyer, of New York, he presented a method which was a modification of that of producing artificial respiration devised by Dr. George E. Fell, of Buffalo. The method consisted in forcing air into the lungs by means of a foot-bellows connected by rubber tubing to a set of tubes which Dr. O'Dwyer had devised. These tubes were constructed to enter the larynx *per vias naturales*. The introduction of the tubes was quite easy to one familiar with the operation of intubation. The only danger attending this method was injury to the lungs from forcing air in and not allowing sufficient time for it to escape, resulting in over-distension and rupture of the pulmonary vesicles. This was obviated by making the respirations slowly—10 to 20 a minute. The method was of value in all forms of narcotic poisoning and might prove useful in those cases where the inspiratory muscles were rendered temporarily useless. Another use to which the tubes might be applied was to prevent blood from entering the lower air-passages during operations in or about the mouth, while at the same time affording a free passage for the air to and from the lungs.—*New York Medical Journal.*

The Medical Age.

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Original Articles.

MILITARY SURGERY AND MODIFIED WARFARE.*

DISCUSSED BY PROF. VON BILLROTH.

In a recent debate in the Austrian Delegation respecting the appropriation for the army, von Billroth spoke at length on the necessity of reorganizing the sanitary service in a manner to correspond with the modified conditions of warfare following the employment of new weapons.

"The experience of army physicians teaches," said von Billroth, "that wounds from cannon and grenade balls are extraordinarily slight, compared with those inflicted by musket-projectiles. In the encounters at Weissenburg and Wörth I had opportunity to examine the wounded, and the same observation could be made elsewhere, that but few of the wounded were artillerymen, to say nothing of the cavalry, for stroke—or thrust—wounds are the greatest rarities. Expressed in figures, the result might be stated thus: At least 85 per cent. of all wounds are caused by musket-projectiles, perhaps 15 per cent. from the heavy guns, and 5 per cent. from strokes and thrusts. These figures, of course, apply only to battles, and not to the wounds inflicted by siege-guns. This, it is claimed, is caused by the fact that soldiers struck by cannon-balls and large grenade-missiles usually fall dead, or are so severely injured that they soon succumb. But during the war of 1870 lists were made of the dead placed in the general graves, and it was found that the percentage of those wounded by the heavier guns was very slight.

"As to the action of the new projectiles, we have no experience, simply conjectures. Some think matters will not be so bad; in the future they will shoot from such distances that few or none will be hit, and more dependence will be placed on strategy in out-manœuvring the enemy than upon wholesale destruction. But strategy has its limits. With respect to the action of the new projectiles this will be considerable in consequence of the greater propelling force and vigor of percussion, and the ball which was formerly resisted by a bone will penetrate, and will perhaps shatter, two or three more adjacent bones. The carrying distance of the new missiles, when not resisted in their course, will be as great as 1½ kilometres. The number of the severely wounded will, therefore, at all events be considerable, and even if the wounds should be effected only in the soft parts, and should consist largely of mere scratches, the army will thus be largely diminished. The soldiers look upon this species of warfare, in which the enemy is not seen, the shooting being directed not at the individual but at the mass, as a form of duel. The rapidity of shooting will also be increased by the fact that in using smokeless powder the enemy will be more constantly in view. Formerly, after ten shots, everything became so clouded in smoke that, at best, one could only shoot in the air. Now the enemy's position will be visible, and the number of wounded will be considerable.

"As a result of the greater carrying distance of the new projectiles, the field-hospitals will have to be further removed from the scene of battle. If every bearer of the wounded must now take 400 steps additional, when we consider the weight of a heavy man, *plus* accoutrement, equalling perhaps 120 kilogrammes, it will be seen that the transport of the wounded on a large scale and for a long, uninterrupted period will be absolutely impracticable. And, as a result of the more rapid movements of the troops, the field-hospitals will have to be changed about more frequently. But an improvised hospital cannot be established at all points—a house, a grove, a ditch, or a covered barn

*Trans. from the Inter. klin. Rundschau, by Joseph Helfman, Detroit.

must be selected, and we shall feel the absolute necessity of providing a large number of wagons immediately behind the array of battle in order to bear off the wounded."

With respect to the consequences of employing smokeless powder, von Billroth foresees that the storming of fortified positions will be effected only by the greatest sacrifice of life, and here the personal courage, especially of the officers, will be tested. If, in such instances as in the storming of the Gaisberg at the battle of Weissenburg, the officers do not lead, the men will not follow. In storming the Gaisberg, the colonel was the first to fall, then the captain, then the first lieutenant, and finally a young second lieutenant seized the banner. The French behaved similarly in the defense. In these cases of patriotic frenzy an immense number of wounds are inflicted. I recall a poor Parisian lad, a second lieutenant, eighteen years old, who had fourteen wounds, and who stood erect, clinging to his sword and his flag, until the last shattered his thigh. In the absence of smoke the dismounting of batteries will be attended with less difficulty, for the men serving the guns will be more readily and continuously visible, hence in greater danger.

Finally, there remains one form of warfare to be considered—the *human chase*—which is the most horrible of all. This occurs between the outposts, when the exposure of a hat or helmet behind a defense is the signal for a volley. Smokeless powder will increase the accuracy and frequency of firing.

Facilities for the transport of the wounded will certainly have to be increased. With respect to voluntary aid in this respect, we have—for the first line of battle only—the German Order; the Knights of Malta and St. John have provided trains for the wounded, and the Society of the Red Cross will be busied chiefly with the reserve.

The Ministers of War have always declared that great battles are like the catastrophes of nature—it is impossible always to foresee what may occur. But this is not true. A battle is no such phenomenon as, for example, an earthquake in Japan, in which 5,000 people are swallowed up. In our day it is possible to estimate with tolerable accuracy what will be eventually needed. From the data furnished by the various battles, giving the exact number of combatants and the number of wounded, we can approximate the ratio of the latter. Whether this ratio will be increased remains to be seen. Take, for example, Gravelotte and St. Privat. This was one of the greatest engagements that ever took place with respect to the numbers of the opposing lines. The battle began at 12 o'clock and was over by 8. Five thousand were killed and 15,000 wounded in these eight hours. Based on the data then at command, it was calculated that, of the wounded, two-thirds might be considered as slightly wounded and only about a third severely hurt and requiring detention. For the transportation of all the slightly wounded there were the railroad and sanitary trains. If we now assume that two bearers with a litter can cover the distance of five, six, or seven hundred paces in these eight hours, say, ten times, we may infer that the Germans would have required in the above-mentioned battle 500 litters and 1,000 bearers. But inasmuch as the contest proved a victory for them, and the Germans were obliged to care for the severely wounded French soldiers—assuming an equality in the numbers of the wounded on both sides—1,000 litters and 2,000 bearers would have been needed! The whole bearer and litter business is absolutely impracticable in war.

By the War Department it is urged that it is impossible to increase the train by chartering cars or wagons. Wagons rented from the peasants are frequently used for the transport of the wounded. Thus, after the battle of Wörth, I saw a transport of wounded on a peasant's wagon; the latter was filled with wounded, and from both sides hung down their weapons and shakoes—reminding me of our hunting-wagons, which bear the large game in the center whilst the hares are hung upon the sides. These wounded had lain on the field the whole night and part of the following day; they had at last been found, and luckily a wagon was also discovered. But this is only an accident in war. If it be urged by the War Department that an increase of the trains will render them too ponderous and slow, I reply that in recent times a number of things have been attached to the trains and others will be added. Why, then, in caring for the

wounded, is it necessary to avoid augmenting the trains? Strategic science has been forced to modify and transform itself in accordance with the new conditions, and these matters also must be taken into account.

When shall aeronautics have made such progress as to bring forth combats from above downward, or when shall we have bombs to fling down upon the enemy, or when shall electricity have made such progress that electric batteries can be borne up in balloons and made to hurl their lightnings upon an army? These are not exaggerated fancies. In the respect above dwelt upon, modifications must also be made, and everywhere in the public mind there is now the determination that care of the wounded must also be modified to correspond with the increase and development of the weapons.

With the approach of night, there is need of means for illuminating the battle-fields. We are still without the requisite electrical apparatus, by means of which and of large reflectors the battle-field is illuminated and the wounded discovered. England, France, and Germany have this apparatus, but we still forego it.

The speaker closed his remarks by an allusion to the necessity of maintaining academies for military surgeons. All the countries of Europe have such academies, and the substitutes which have been tested have not proved satisfactory.

PERITONITIS FROM A SURGICAL STANDPOINT.

BY A. V. L. BROKAW, M.D.

The treatment of peritonitis until recently has been clouded in superstition and ignorance. This would possibly have continued indefinitely but for the scalpel of aggressive surgeons, who have learned pathology at the operating table, not in the dead-house. The work of such men as Price and Tait has overthrown existing doubts and exposed the fallacy of such treatment as that advocated by blind theorists. The opium, poultice, iodine, and blister treatments have furnished statistics which, to say the least, are frightful. The records of the autopsy chambers should be used as an argument for some other treatment than that of the past. The mortality has been too great to allow of any hesitation or consideration of the weak, vacillating arguments of the theoretical.

Peritonitis is as assuredly a surgical disease as any the surgeon is called upon to treat. Every practitioner should in emergency be capable of meeting the immediate indications. Persistency of symptoms always means section, irrigation, and drainage. To classify the varieties of peritonitis as to form, no little difficulty is met with, for the disease often presents itself when the classical symptoms are not at all apparent. Perhaps the best classification as to cause would be the following:

(1) Traumatic peritonitis (developing after accidental traumata or surgical operations); (2) peritonitis due to ulcerative perforation of abdominal or pelvic viscera (appendix, intestines, stomach, Fallopian tubes, gall-bladder, bladder); (3) peritonitis due to incarcerated hernia and intestinal obstruction; (4) peritonitis due to rupture of intra-abdominal abscesses or tumors (ovarian or other cystic tumors); (5) puerperal peritonitis; (6) peritonitis from obscure and undetermined causes; (7) localized peritonitis; (8) tubercular peritonitis.

It is not my intention to give the details of the special procedures indicated for each and every case, but only the great principles of treatment which should govern all cases of peritonitis. When well defined symptoms of peritonitis exist, nothing short of radical procedures will give perfect results. Generally speaking, abdominal section is assuredly indicated in the majority of cases, and holds out the only means of affecting a cure. In certain cases of mild localized peritonitis of pelvic origin, saline or calomel purgation will at times relieve existing symptoms, and necessarily these remedies should precede section, if the symptoms are not too threatening.

The high percentage of deaths in cases of peritonitis treated by laparotomy must be attributed to late operations. With the definitive symptoms of pus, no matter where located, there is but one indication—evacuation and intelligent after-treatment. A few hours' hesitation, and all may be lost. No matter how low the patient's condition, even if in a state bordering on collapse, well di-

rected surgical efforts may succeed. It may be necessary to do an incomplete operation, in certain cases, to tide over an existing unfortunate state. Under an improved condition of the patient, the incomplete operation may be finished at a later date, with all the surgical nicety of an operation of election. We hear on all sides of certain surgeons refusing to operate when acute inflammatory symptoms are present. These same gentlemen select only favorable cases for operation, and are derelict in their duty to their patients. They operate only for statistics, not for the good of the unfortunates. We owe it to humanity to do what the exigencies demand, even if we jeopardize our good statistics. When one knows what is the proper thing to do and fails to do it, the action is reprehensible, and many lives are lost which might be saved but for the timidity and the failure to act on the part of the attendant.

In peritonitis, as in all other desperate diseases, the situation should be explained to the patient, and consent obtained to do the necessary operation. Whatever is done in cases of peritonitis should be done promptly, without hesitancy and lack of decision. If the medical treatment of peritonitis does not give prompt, quick results, it should be put aside and a rational measure adopted—a section. The pathologically ignorant and the timidly conservative, so-called, always counsel against the early use of the knife. If a condition demands the use of the knife at all, it should be as early as possible. I have had in the past few months the positive evidence of good results from early operative interference in cases of peritonitis, and call to mind cases in which the patients, on the verge of dissolution, were saved by prompt surgery. The following brief synopsis of a few cases may be of interest and illustrative of the measures advocated.

Case 1.—Child, seven years of age, seen in consultation with Dr. A. C. Robinson. Child sent to St. John's Hospital in a low, critical condition; pulse weak, thready; temperature 104; perityphlitic abscess; all the signs of peritonitis; immediate operation; gangrenous appendix, ruptured perityphlitic abscess into peritoneal cavity; pelvis filled with over a pint of pus; intestines, omenta, everything matted together by recently formed lymph; peritonitis almost general; abdomen flushed out with several gallons of hot water; large and small abscesses; cavities broken up; all adhesions separated; drainage tube; gauze packing; recovery.

Case 2.—Mrs. Annie E., referred to me by attendant. I found upon examination localized symptoms of peritonitis. Section; irrigation; evacuation of over a gallon of pus. Pus cavity extending from floor of pelvis in front and behind the uterus upwards to the liver. Pelvis and abdomen thoroughly packed with gauze; rapid recovery.

Case 3.—Mrs. W. Right and left pyosalpinx. Hurried to the hospital; condition very critical; temperature 105.2 when placed on the table. All symptoms of an acute peritonitis present. Immediate section; large abscess; rotten ovaries and tubes. Peritonitis from a leaky tube; irrigation; drainage; recovery. This patient induced an abortion upon herself some weeks previous, by passing a hairpin into the os and injecting cold water into the uterus with a Davidson's syringe.

Case 4.—Miss D. Repeated attacks of peritonitis. Temperature 104.4 at time of operation. On section found a ruptured pelvic abscess; large pus tubes; irrigation; drainage; recovery.

Case 5.—Mrs. I. Secondary laparotomy for peritonitis, following a section done seven days before. Temperature 104; abdomen reopened; adhesions broken up; free irrigation; drainage; gauze packing; recovery.

Cases 6 and 7.—Peritonitis following accidental abortions.

Cases 8 and 9.—Peritonitis following criminal abortions.

These cases might be added to, but are sufficient to illustrate the value of the treatment recommended. But one death occurred, and all were what might be truly considered desperate cases.

The case which terminated fatally was one of acute general peritonitis of the most malignant type, occurring in a young girl upon whom a criminal abortion had been performed. The case was seen by my father, and treated by him on general medical principles. Saline purgatives and other measures not relieving existing symptoms, and the con-

dition of the patient becoming worse, I was asked to see the case. The patient's statements were misleading and, as afterwards found, utterly unreliable. All attempts at thorough methodical examination were objected to by the patient, who threw all the obstacles in our way possible. When consent was given to a digital examination, it proved unsatisfactory because of the objections and pain experienced by the patient. An examination made at a later hour revealed nothing of a positive nature as far as the cavity of the uterus was concerned. The discharges were scanty and not offensive, the vaginal vault was board-like, thickened. Two immovable masses could be readily made out on either side of the uterus. A diagnosis of acute peritonitis and abscess of the ovaries was made at this time. The abdomen was exquisitely painful and greatly swollen. The patient wildly denied any impeachment of her virtue, and was insulted at the mention of her trouble being connected with any misbehavior on her part.

The salines were ordered continued, together with hot applications to the abdomen and hot vaginal douches. Late the following evening I was summoned to see the patient, who had suddenly grown much worse. I came prepared to operate, and was accompanied by Drs. Mooney, Newman, Temm, McLean, and Fitzpatrick. I found the patient in an almost dying condition. Immediate preparation was made for an operation, under unfortunate circumstances, at midnight. The patient had a temperature of 104°; pulse weak, 142. Under anæsthesia a median incision was made. On opening the peritoneum over a quart of purulent fluid escaped. The intestines were congested and greatly distended; flocculi of lymph and recent adhesions everywhere; ovaries enlarged, rotten, and friable; the tubes gangrenous—so soft and disintegrated that Dr. Mooney, who assisted me, actually tore off the right ovary and tubes while holding the structures when the ligatures were being applied. The pelvis was rapidly cleaned out, the abdomen thoroughly flushed, a tube inserted, and the abdomen closed. Patient reacted slowly.

In the morning the patient was seemingly better, temperature normal, and everything appeared more favorable. In the afternoon the temperature began to rise; and thinking that there might be something in the uterus to account for the rise in temperature, the patient was given a few whiffs of chloroform and the cavity of the uterus was rapidly curetted. Nothing of consequence came away; a few small clots and some disintegrated tissue was all that could be found. Before curetting, digital examination revealed nothing in the cavity of the womb.

In this case the progress of the peritonitis had been most rapid, and the patient was profoundly septic. While placed in a more favorable condition after the section, the sepsis was so general that all efforts failed, and the woman succumbed.

This case teaches us that early operative interference is absolutely indicated, and that there are forms of puerperal peritonitis so rapidly fatal that the delay of a few hours may place the patient beyond all surgery. The curette is not to be relied upon the minute the infection has extended to other pelvic structures. We might as well expect by putting out the fire in a grate to check a general conflagration raging in a house. Brilliant results have recently been recorded of patients dying from puerperal peritonitis and saved by a section. Every surgeon who is in touch with the advanced ideas of to-day agrees that no other treatment can avail or hold forth any hope in these desperate cases. In a correspondence with the greatest living authorities in America I found perfect accord on this subject. In my opinion, no case of general peritonitis can recover without operation, and cases reported recovering without operation had best be relegated to the shelves of fiction, or, to be charitable, passed by as an evidence of ignorance on the part of the reporter. Cases of localized peritonitis frequently recover. No one with any experience doubts that, and occasionally even extensive inflammations of the peritoneum may subside. It has been estimated that the peritoneum has an area of 2,700 square inches. When this great area is considered, the extent of a general inflammation is frightful to contemplate.

All cases of peritonitis do not present the same symptoms, and with an increasing experience we find that a diagnosis of peritonitis is not always easy, the classical symptoms

being often masked, or the usual collective symptoms not well marked, some of them possibly being absent. A high temperature is not essential. A subnormal temperature may be met with and is relatively frequent. The abdomen may contain quarts of pus, and few symptoms of value present. Abdominal distension may or may not be well marked. Fatal forms may occur without decided macroscopic changes. It is just in this latter class of cases that the onslaught of the disease is sudden and the fatal result rapid.

Peritonitis may be followed by early septic endocarditis, a frequent cause of early fatal issue. Tympanitis always adds to the risk. It may mean additional auto-infection and a liberation of the *bacterium coli commune* or other microbes. There is no single symptom to be relied upon. The pulse is usually thin and thready, but may be full and strong. The most constant symptom is pain on pressure, and, next to it, the facial expression, the expression of anxiety and alarm. Rigidity of a muscle or a group of muscles is always a sign of positive value. The amount of pain and the suffering of the patient may be very great, but cases are occasionally met with where the pain is easily borne. Opium should be withheld, if possible, until a diagnosis is established. Its influence masks all positive symptoms and leaves us in the dark.

St. Louis, Mo.

DOUBLE CAPILLARY BRONCHITIS.

BY DR. G. BEAUMONT.

The case of this patient, a male child, fifteen months old, the parents in good health, no history of scrofula or phthisis, is an interesting one for many reasons, the sequel, or may be the intercurrent, diseases following in quick succession. Upon the relief of the most urgent symptoms of the lung trouble there was an attack of acute nephritis, which caused suppression of urine for seventy-two hours, followed after the first day by coma. Following the nephritis there set up pleuro-pneumonia in the left lung, with effusion and the resultant pus. I will now take up the troubles seriatim:

Capillary Bronchitis.—The child had a severe cold for three days, followed by some cough and fever. On the fourth day I was called to see it, and found the following symptoms: Great difficulty in breathing, and a seeming fear to take a deep inspiration on account of the severe pain caused thereby. Upon auscultation I found subcrepitant râles extending over the region of both lungs. Percussion elicited very dull resonance, and when that is the case we have cause to fear the substance of the lung is involved. Whether this was the case in this instance we will see further on.

The temperature was 103° the first visit, in the morning; that evening it was 104°, and ranged from 100° to 104° the entire time of sickness. The pulse ranged morning and evening from 130 upward, until it could not be counted. The face was pallid, the extremities livid and cool. The mucus accumulated in the air passages so rapidly as to endanger life, causing a cyanosed condition all over the body. Usually in this condition the patient loses all desire for nourishment, and if taken it will be quickly vomited. My little patient's stomach remained faithful to its duty all through the attack, and to this I attribute its final recovery.

It is better never to persist in giving a remedy that causes the patient to vomit or lose desire for nourishment, for the reason that with proper nourishment and assimilation nature and good nursing will do wonders. It is claimed by Smith, on "Children," and others that where both lungs are involved, the chances for recovery are very poor. In the above case the bowels were regular, the kidneys acting fairly well, no albumen, but loaded with phosphates, and at times a brick-dust-colored deposit.

Treatment for the bronchitis:

℞ Tr. aconite root, } āā ℥ ss.
Tr. belladonna, }
Infusion digitalis, ℥ j.
M.

One-half teaspoonful was given every hour for four hours, then every two hours; the bowels acting, no purgative was given.

Locally applied:

℞ Tr. iodine, ℥ ss.
Oil lobelia, gtt. x.
Glycerin, ℥ iss.
M.

Use twice a day, with some flannel cloth placed around the entire chest, covered with oiled silk.

For the cough I gave:

℞ Elixir pinus compositus (Merrill & Co.'s), ʒ ij.
Ammonia carbonate, gr. x.
Aromatic syrup yerba santa, ℥ ij.
M. Sig.—Half-teaspoonful every four hours.

To quiet restlessness I gave one-half drop pulsatilla every thirty minutes until quiet, or until four doses had been given. This had the desired effect.

The above treatment was given for twenty days. For nourishment I gave beef essence (Armour's) in addition to the breast, for fortunately the mother still nursed the child. There was improvement from the sixth day until the twentieth, when there was no fever, cough, nor any unfavorable symptoms. On the fifth day after ceasing my visits I was summoned in haste to see my former patient. I found him in a semi-comatose condition, and the mother stated that the child had not passed any urine for twenty-four hours, and that the last few times when he had passed any at all it was bloody and gave great pain. Upon inquiring I found that there had not been any medicine given, but the mother, fearing a return of the bronchitis, had saturated a flannel with turpentine and applied it around the chest, producing strangury, and finally nephritis and entire suppression of urine. Bear in mind, the child was still nursing. I at once applied a belladonna poultice over the kidneys, injected hot water into the bladder, and gave five-grain doses of Epsom salts dissolved in uva ursi tea. I also gave fluid ext. pilocarpine in five-drop doses every hour for its diaphoretic effect. With this treatment we had the satisfaction, after forty-eight hours, of establishing secretion of urine. Yet for several days it contained blood and was painful in passing. The stomach now failed us, and it seemed we would lose the boy in spite of all, but hydrochloric acid diluted with ingluvin, or rather chicken-gizzard tea, made fresh, brought the stomach to a retentive condition. Following this there was general anasarca, the abdomen very much distended, causing labored breathing. For this we gave elaterium in ⅛-gramme doses, also infus. digitalis leaves. With this attack there was but little fever. This treatment was continued until the dropsy was relieved, and it seemed the patient was on the road to recovery, when intercurrent pleuro-pneumonia developed, and also effusion, with all its attendant symptoms of fever, cough, etc.

Here was a case that appeared to require all the help one could obtain. I now called Drs. Carter and Tucker, and on consultation and weighing the probable danger of air entering the cavity if resection of rib was performed, the bulging of the intercostal spaces, and the imminent danger of delay, we determined to aspirate. After administering Squibb's chloroform I introduced the aspirating needle between the sixth and seventh ribs, on a line drawn from the angle of the scapula to the crest of the ilium, and drew off two quarts of pus, this having the effect of relieving the breathing and fever. The child was now given syr. iodide of iron with fluid ext. babtisia, the first for its tonic and alterative effect, the babtisia to prevent the breaking down of tissue. The most nourishing food was now given by stomach and rectum. The child gained flesh and improved for about one week, when the pleural cavity began filling again, causing fever and loss of desire for food. I again aspirated, and drew off about one and a half pints of pus. Fearing this constant drain would prove fatal, we determined to place a drainage tube. We had one made of silver, bent at a right angle with flange, introduced it, and twice a day washed out the cavity with a solution of phenol-sodique, one drachm to four ounces of water. From this time there were no unfavorable symptoms. The tube was removed in about ten days, and the child is now in health, six months after being discharged.

Was the pleuro-pneumonia and rapid accumulation of pus caused by a latent pleural trouble from the capillary bronchitis? Remember that fever, cough, and restlessness were absent for about ten days.

This is rather a lengthy article, and is not written for the older M. D.'s, but for the benefit of those who have not yet had an extended practical experience.

Dallas, Tex.

CLINICAL LECTURE.

BY BARTON COOKE HIRST, M. D.

ABDOMINAL SECTION.—Here is a girl about nineteen years of age, who twenty-one months ago gave birth to a child. After childbirth she gave no history of illness; she got up at the usual time, and went about her ordinary occupations. After being on her feet for a little while, however, her health began to fail. She began to suffer from the well-known symptoms of pelvic and uterine disease, and this continued on and off for a year or more. During this time she had never been obliged to go to bed on account of her trouble, but steadily decreased in weight, and complained constantly of pain in the pelvis, which was worse before and after menstruation. This state of affairs continued until some time in the last summer, when the patient was brought into the hospital with a very high temperature, almost 104 : a rapid pulse, 124 and over to the minute; the abdomen much distended and excessively sensitive. She was taken to the medical ward with the idea that her disease was typhoid fever or appendicitis. The case was studied by Dr. Cohen, who concluded that the symptoms were all referable to the pelvic viscera. I was consequently asked to examine the girl. We went over the case carefully together and excluded typhoid fever and appendicitis, while we felt indistinctly small sensitive masses in the pelvis to either side and behind the womb. In the presence of these physical signs we diagnosticated the case as one of pyosalpinx, with an outbreak of peritonitis. The peritonitis subsided rapidly, as it usually will when it is sympathetic, so to speak; that is, not in itself septic, but the result of a localized septic process.

As soon as her temperature was reduced to normal I opened her abdomen, expecting to find double pyosalpinx, but quite prepared to learn that my supposition was incorrect, as mistakes in the diagnosis of this condition are of constant occurrence. However, our diagnosis in this case proved to be correct. We found a double pyosalpinx. The tubes and ovaries were completely removed. During the operation there arose a complication we sometimes meet with. After the ligatures were tied, the base of one broad ligament began to bleed very freely. It is often very difficult in these cases to tell the cause and origin of the bleeding. We controlled it quickly by ligating the base of the broad ligament en masse. A drainage tube was inserted for twenty-four hours. The convalescence has been uninterrupted. The wound is now entirely healed, and, as you see, a mere linear scar; the girl is completely well, and she will go out perfectly cured, without any fear of recurring peritonitis. I am rather proud of the good union in our abdominal wounds which we get here. It has been my good fortune to escape abdominal hernias. This I attribute to the use of large curved needles, to the careful apposition of the wound, and to the avoidance of the linea alba.

ABDOMINAL SECTION FOR OVARIAN CYST.—I have next to show you a complication of abdominal operations which is not so much to be feared as hæmorrhage, but which might appear equally terrifying to the beginner. This girl was operated on by one of my colleagues for what was supposed to be a pyosalpinx, but which turned out to be a small ovarian cyst. The cyst was removed without difficulty. Two weeks after the operation, fever developed and increased. After several examinations, no cause for the rise of temperature was discovered, and we were at a loss to account for the girl's fever. One night the whole abdominal wound burst open, and gave vent to a large pus collection, apparently between the abdominal wall and the bladder. The pus had been completely encapsulated and shut off from the peritoneal cavity. We washed out the cavity and put in a drainage tube. The wound, as you see, is granulating, and will ultimately firmly close, although at first sight this might seem improbable. I remember well the first accident of this kind I ever encountered. I had operated for a large ovarian cyst. The woman tossed about after the operation in a most restless, almost maniacal, manner, and could not be restrained. She also coughed and vomited incessantly, and finally burst open the whole abdominal wound so that the intestines came plainly into sight. I gave her up for lost, but cleaned the wound, packed it up with iodoform gauze, and drew

it together with adhesive strips. The woman recovered, with her abdominal wound as firmly united as I ever saw it.

In the present case, after the wound burst open and the pus was discharged, the girl immediately improved, and has been comfortable ever since. We have kept this wound clean with peroxide of hydrogen, a very useful fluid in suppurating tracks and cavities. We replaced the small drainage tube and the iodoform gauze packing, but will not have to continue either long.

TAIT'S OPERATION.—The next patient is a woman on whom was done an operation by one of my colleagues for laceration of the perineum after Emmett's plan. The external stitches did not hold, so that I shall restore the skin perineum and the vaginal inlet by a Tait's operation, which is good for this purpose but is not to be depended upon, in my opinion, to restore the strength of the pelvic floor, and is, therefore, only available for minor grades of lacerated perineums. Tait's operation has the advantage of sacrificing no tissue in the denudation. It is performed by making a cross cut in what was once the perineum, but what now looks like an enlarged vestibule. At the extremities of this cut incisions are made upward and outward, also downward and outward. Tenacula are then fastened in the angles of the incisions where they meet on either side, and by pulling the angles downward and inward, and upward and inward, the wound is converted into a rhomboidal figure. Stitches are introduced across this figure, just avoiding the skin and emerging in the centre of the wound.

CONCEALED PREGNANCY.—The next case is one of my mistakes which taught me a valuable lesson, and which I hope may be of benefit to you as a warning. I overlooked in this woman the existence of pregnancy, although I examined her twice carefully—once under ether. There is no excuse for a failure to recognize pregnancy in a normal, well advanced case. But complicating factors can make the diagnosis extremely difficult, and every one of us may sometimes make a mistake if we are not careful, while on rare occasions the recognition of pregnancy seems well nigh impossible. Mistakes in the diagnosis of pregnancy are usually the result of carelessness. I have seen many cases of this kind. I was asked about a year ago to operate upon a lacerated cervix in a woman whom I found in the seventh month of pregnancy. On another occasion I found a woman who had been treated for gastric cancer, when in reality she was suffering from the nausea of pregnancy.

A woman was sent to me a few months ago with an abdominal tumor, which her physician in one of the southern states believed to be a fibroid requiring hysterectomy; the tumor was a pregnant uterus in the eighth month of gestation. I have been told the details of the following case by one who knew the principal actors in it: A surgeon was requested to come to a town in the interior of the state to operate for a large ovarian cyst. He was told that, if he arrived at a certain hour by train, everything would be in readiness for the operation. He arrived at the time agreed upon, and found the woman upon the operating table, ready to be anæsthetized. Making a hurried examination of the abdomen, he concurred in the diagnosis of the attending physician, and at once prepared to operate. On opening the abdomen, he found a large pregnant uterus. Not possessing sufficient moral courage to confess his mistake, he transfixed the cervix as a pedicle and removed the womb, remarking as he tossed it into a bucket under the table, that it was an unusually large ovarian cyst. One of the family had the curiosity to investigate this tumor after the operation, and discovered its true nature.

Last spring I was invited by a prominent operator of this city to witness a Cæsarean section. When the abdomen was opened not a trace of so much as an embryo was discovered. The woman had a large fibroid tumor. I had always rather congratulated myself on my freedom from such mistakes, but now, after telling you of the errors made by other physicians, I must confess a blunder of my own. One day last summer a young woman came to my office with the statement that she was pregnant at term, and desired to enter the University Maternity Hospital. I looked at her with astonishment, for as she stood before me there was no abdominal protrusion at all. In answer to my questions she said that there had been one sexual con-

tact in October, and that since that time her menses had ceased. She declared that she felt fœtal movements, and she was convinced that she was nine months pregnant. I at once concluded that the girl belonged to that class of women who, either from fear of impregnation or from an intense desire for it, imagine that pregnancy exists, and simulate many of its symptoms. It is astonishing what a hold this idea takes on the imagination of some women. They become monomaniacal on the subject sometimes, and it is impossible to convince them of their error.

A story illustrative of this phenomenon is told of the celebrated French surgeon, Dupuytren. A woman came to him and said she had been pregnant for eighteen years. She desired his advice as to what she should do in this trying and embarrassing situation. The physician looked at her for a moment, and said gravely: "Madam, you had better swallow a private tutor, for your child's education must be sadly neglected."

On my examination of this girl, I found by abdominal palpation a tumor stretching from some distance above the symphisis to the umbilicus, about four inches wide at its widest part, and freely movable. There were no fœtal heart sounds to be heard, and no fœtal movements to be felt. There were no intermittent uterine contractions. On vaginal examination the cervix was found to be soft, but I thought I felt the uterine body of normal size above it. At the operation subsequently performed this proved to be the lower uterine segment, much stretched. I could not elicit ballottement. I told the girl then that if her story was true—that there had been a single contact nine months before, since which time her menses had ceased—she could not be pregnant, but must have some other form of abdominal tumor which would require an operation. She repeated her former story with every appearance of truth. I sent her to the Philadelphia Hospital, and the next day with my colleague I examined her under ether. We found the same condition as before, and both concluded that the tumor was not a pregnant womb. Consequently I operated on the following day. On opening the abdomen I discovered at once a pregnant uterus, curiously altered in size and shape. It was exceedingly narrow, more so than I should have thought possible had I not seen it. At the level of the umbilicus the uterine body was displaced backward *behind the intestines, and reached almost to the level of the ensiform cartilage.* I immediately closed the abdomen with unusual care to secure accurate apposition of the wound surfaces. The recovery was uncomplicated, and to-day, three months after the operation, the girl is expecting her delivery at any time. You see that the scar is firm and has not spread, and the patient has suffered no ill effects from the operation. By the time the stitches were taken out, the uterus had resumed its normal size and shape, and presented all the appearances and signs of the sixth month of pregnancy. The distortion and compression had been the result of extreme tight-lacing. The girl had told me a lie about the date of intercourse and of the cessation of menstruation, as she confessed later. What were her motives I cannot imagine.

I am accustomed to dealing with cases of this kind in the Maternity Hospital on Tenth Street, an institution devoted to the reception of girls illegitimately pregnant for the first time. All our patients there have endeavored to conceal their condition by tight-lacing, and their statements must be regarded, as a rule, with suspicion, but I never encountered before such an extreme degree of deformity from tight lacing, nor have I ever had to deal with such a peculiar form of mendacity. A mistake of this kind could have been avoided had I kept the girl in bed for a week without her corsets, but I confess this never occurred to me at the time. Again, had the girl been examined several times more, the true nature of the abdominal tumor might have been detected. This is the most important lesson to be learned from our case—to take plenty of time in every case of suspected pregnancy, and to make, if necessary, repeated examinations.

Diagnosis of Pregnancy.—I wish now to call your attention to an old and trite subject, but one of ever-fresh importance, the diagnosis of pregnancy, and I will illustrate the methods of making a diagnosis in the case before you. I have given you instances of mistakes which are of constant

occurrence in general practice, and I have described one mistake of my own. I shall now point out the means by which we can best avoid these mistakes. The best plan is in every case to follow some carefully devised method of examination as a routine practice, and never deviate from it. In order to do this we must first make a theoretical study of the signs of pregnancy, and then divide them by some logical system. It is customary to divide them into the subjective and the objective symptoms.

The subjective signs of pregnancy are those which the patient herself experiences, and which she must describe to the physician. They are not, you will understand, entirely reliable; there is no one subjective sign, nor is the whole collection of subjective signs, absolutely certain as a symptom or symptoms of pregnancy. The objective symptoms are those which present themselves to the senses of the physician, and, therefore, are much more valuable.

I will begin in this case by inquiring for the subjective signs of pregnancy, assuming that I do not know the condition of this woman. I have been accustomed in my didactic lectures to arrange the subjective signs of pregnancy in the following order: Cessation of menstruation; nausea and vomiting; changes in the size and shape of the abdomen; changes in the breasts and genitalia; quickening; changes in the nervous system. This order I make it an invariable rule to follow in the oral examination of a patient, that I may omit nothing of importance, even in the subjective signs:

"Have you had your sickness lately?" "No." "How long has it been absent?" "Since February." "What time in February?" "You do not remember whether it was the middle or the last part of the month that you had your sickness for the last time, but you have not seen it since." Now, therefore, if she is pregnant, she is one month short of full term. We have in the very outset of our examination presumptive evidence of value. If a woman ceases to menstruate, the most common explanation is pregnancy, so this occurrence should attract the physician's attention at once to the possibility of gestation. But the cessation of menstruation is not a certain sign. Change of climate may be responsible for it; we see it often in immigrant girls; pathological alterations in the nervous system will sometimes have this result; it may be one of the manifestations of hysteria; it is occasionally the result of inflammatory changes in or about the uterus, usually those inflammatory processes which result in the destruction of the tubes and ovaries as if they were removed by the knife; and it may be one of the beginning signs of phthisis, a disease of dreadful frequency among us. Pelvic tumors and subperitoneal fibroids may be the cause. So the mere fact that menstruation has ceased does not show that this woman is pregnant, but it attracts our attention to the possibility of gestation because it is the most common cause for the cessation of menstruation. On the other hand, had this woman given me the positive statement that menstruation only ceased five, instead of eight, months ago, or had she declared that menstruation still occurred, and presented to my own senses the physical signs of advanced gestation, the history in regard to the menstruation ought not to lead me astray, because there are quite a number of women who menstruate through the first two or three months of pregnancy and some who menstruate regularly throughout its whole course. We will now ask for the next sign: "Have you been troubled with sickness of the stomach within the last six months?" "Yes." "Did you ever feel a disposition to vomit?" "Yes." "When was this, and how long did it last?" She does not remember; it is rather difficult to elicit an intelligent history from this individual. We expect nausea about the sixth week, lasting for varying lengths of time, usually not beyond the third or fourth month, but in some cases throughout the whole gestation, and in others recurring from time to time. Having obtained this information from our patient with some difficulty, it is of additional value taken in connection with the cessation of menstruation. There are many women, however, in whom sickness of the stomach occurs quite independently of gestation. Local causes in the stomach, other reflex irritations from the genitalia beside the growing womb of pregnancy, may account for it. There are, however, some women who can tell their

own condition with absolute certainty by this sign. They are women who have had previous pregnancies in which nausea has occurred very early and with unfailing regularity. In one of my patients it has appeared five days after conception, and such women come to attach very great importance to this sign of their condition, and rightly so. On the other hand, it is entirely absent from some individuals from the beginning to the end of pregnancy. In the average case, however, it is of distinct value among the subjective signs of pregnancy.

To proceed to the next symptom. "Have you noticed in the last eight months any change in the size and shape of your stomach?" People of this class usually indicate the abdomen by the term "stomach." "When did you first notice it?" She says she first noticed the change six months ago. If she is correct, she noticed it very much earlier than usual. Generally women are not conscious of the distension of the lower part of their abdomen until about the third month. I have seen a woman who at the seventh month had not noticed the change in the size of the abdomen, although it was of course considerable. But in some women a change in size and shape of the abdomen is remarked very early indeed—not an enlargement, but a sinking or flattening of the hypogastric region, which is the result of the sinking into the pelvis of the womb, which has become heavier in consequence of gestation. This, however, is the exception; the change first noticed is, as a rule, the enlargement, which attracts a woman's attention generally in the third month, sometimes as early as the end of the second. Now, what value should be attached to this symptom? Under the circumstances in the present case, considerable. When one gets a history of cessation of menstruation for the last eight months, of some nausea about six months ago, of a steady increase in the size of the abdomen, he begins to have a pretty clear account which points rather strongly to gestation; not certainly, however, by any means. All these symptoms will be present in women of nervous character who either fear impregnation or earnestly desire it. The menstruation will cease; there will be, perhaps, "morning sickness," and the abdomen will become enlarged quite as much as it is late in gestation by the accumulation of gas in the intestines. These women become impressed with the idea that they are pregnant until they are monomaniacal on the subject, and actually simulate some of the objective as well as the subjective signs of gestation. Abdominal percussion at once reveals the true nature of these cases. In some women, again, the abdominal enlargement is simulated to a surprising degree by the deposition of fat in the abdominal walls or in the omentum. The fat in these cases can be pinched up between the fingers and thumb, and it can be demonstrated that the tumor is not within the abdominal cavity.

Let us now inquire for the next symptom: "Have you noticed any change in the condition of your breasts? Have you had any peculiar feelings in them at all?" "No." In women of sensitive natures, women in the higher classes, there is often described a tingling sensation in the breasts, with a sense of fullness or enlargement, due to the increased blood supply. The enlargement of the organs, however, is the most striking phenomenon, and will be noticed by almost any one. But our patient fails to tell us of it. Had she done so, this sign would have been of some value, because pregnancy is the most common cause of enlargement of the mammary glands. But many other sources of reflex irritation in the genitalia will have the same effect. Some women have a flow of milk at every menstrual period. On the other hand, some pregnant women notice no change in their breasts at all, as in the case before us. And should impregnation take place during lactation, the mammary signs of pregnancy are masked by the physiological activity of the glands.

We now ask about one of the most important signs of gestation: "Have you felt any movements in your stomach during the last few months?" "Yes, sir." "What have they felt like? Can you describe them to me?" She is unable to do so. In the textbooks these movements are poetically described as "the fluttering of a bird held lightly in the hand." I had no idea, of course, that I would receive such description of these movements from this person. She does, however, give me an account of distinct

movements in her abdominal cavity; and here we have the most reliable sign that we have yet elicited. Indeed, you might be inclined to think that we have come to conclusive evidence, and this would be true if one could always trust the woman's statements. Women who have good reasons for concealing their condition will deny the sensation, others may not experience it. On the other hand, there are some women who, believing themselves to be pregnant, will give an account of what they take for fœtal movements, but what are usually movements of the intestines. There was a very famous case of this sort some years ago in the person of Johanna Southcote, of England, who claimed to be pregnant by the Holy Ghost at the age of 64. Her claims were investigated by a physician, who reported that her abdomen was distended, and that movements, as of the fœtus, could be distinctly felt.

I come now to the last of the subjective signs. "Have you noticed a change in your disposition or temper in the last eight months?" "No." Nervousness, irritability, moroseness, or other marked changes in the disposition may develop in consequence of pregnancy. Women ordinarily of a sweet disposition will become irritable or morose, or strange whims, tastes, and fancies may possess them. In the higher classes these symptoms are often very noticeable, and are consequently of considerable value. Great importance will be attached to them sometimes by the individual herself. These symptoms, however, are of no very great value in the majority of cases. It is not necessary for some women to be pregnant in order to be cross, morose, and bad tempered, and phlegmatic individuals may show no changes of the nervous system, so that these signs, while valuable in certain cases, and sometimes to the woman herself, are not to be depended upon. They are simply to be taken into account in connection with other subjective signs of greater value.

I have come now to the end of my list of subjective signs, and you will have remarked that against every one of them I have found some valid objection. We may in an extreme instance be told them all, and yet the woman may not be pregnant. We may, on the other hand, meet a woman who can tell us of none of these symptoms, and yet be far advanced in gestation. We should not place too much reliance upon them in making our diagnosis. In every case we must appeal to our own senses, and here again, in order to make no mistake of omission, we must follow a routine and methodical course. It is by carelessness, and not by ignorance, that the vast majority of mistakes are made. Mistakes could usually be avoided if the examining physician would follow a rigid rule in every case without exception. I lay down for myself a theoretical division which includes all the objective signs of pregnancy, and never cease in a doubtful case until I have looked for every one of them. The most rational division of these signs is one which takes account of the senses of the physician to which the various signs are manifested.

Consequently, we divide the signs of pregnancy into those which are detected by the senses of sight, touch, and hearing. We commonly begin our examination by an inspection of the woman, and I shall exhibit to you on this patient all the signs of pregnancy that can be seen. We may begin with an inspection of the face. Here we may see the chloasmata, or patches of pigmentation, which are developed during pregnancy. While we are questioning a woman it is well also to keep a sharp eye upon her face, because she may endeavor to deceive us, and we might be able to detect evidences of deceit in her countenance. This will not always be possible; what a woman values perhaps more than her life is at stake, and she will so control her facial expression as to present every appearance of truth. The chloasmata upon the woman's face are, of course, beyond her control. They are most commonly seen in pregnancy, but may be due to other causes.

In the inspection, next, of the woman's breasts we often get some very valuable signs of pregnancy. In the first place we can often notice an enlargement of these organs. In this case, however, you see that the breasts do not appear to be enlarged; their circumference does seem a little increased, but they do not stand out on the pectoral region as prominently as we often

see them in non-pregnant females. In addition to the increased size of the breasts as a result of the increased blood supply, we often see large veins under the skin much more prominent than they are ordinarily. This sign is also lacking here. We will next direct our attention to the nipples; and here we find some signs of pregnancy that are of some value. I find here the pigmentation around the nipple considerably darker than it is ordinarily in women of the blonde type. This area is very distinctly colored, a decided brown in tint, and, in addition to the darkened color, I notice that the area of pigmentation is larger than common, by the addition to it of a secondary areola around the circumference of the first, somewhat lighter in color, and spreading out a little on the white skin of the breast in a wavy line. You all know from your anatomical studies that there are from fifteen to twenty sebaceous glands in the areola about the nipple, the function of which is to lubricate the nipple during lactation. These glands, as you might expect to hear, hypertrophy during pregnancy to prepare for their future function, and stand out plainly under the skin like little beads; they strike the eye at once in this case.

Let me now direct your attention to a very striking objective sign of pregnancy: I grasp the breast about its base in this way, and then rapidly shift my grip to the region near the nipple, compressing the gland quite firmly; as I do so you see a drop or two of a turbid fluid collect upon the nipple. This is colostrum. The objective signs which we have elicited by an inspection of the breast are of great value, but you must bear in mind that there are conditions other than pregnancy which can induce every one of these symptoms. They are simply the result of a reflex congestion of the breast. The most common cause of this increased supply of blood to the breasts is pregnancy, but there are other conditions about the genitalia which can produce the same effect. A growing fibroid of the womb may do it; an ovarian cyst may do it; inflammatory action in the neighborhood of the womb may do it, and many women experience the alterations in the breasts commonly seen in pregnancy, even to milk formation, at every menstrual period. Direct stimulation of the mammary glands may have the same result. Milk secretion has been established in young girls, old women, and even in men by the application to the nipple of a nursing child. On the other hand, a few pregnant women may be found who exhibit no change in the mammary glands during pregnancy.

We will now proceed to an investigation of the woman's abdomen. Note first the change in size and shape. There is an even and symmetrical enlargement from the symphysis almost to the ensiform cartilage. You see that the shape of this abdomen is something like a pear, and you remark that the tumor within the abdomen spreads with approximate equality to either side of the middle line. We have, therefore, in this abdomen the appearance of pregnancy in the latter months of gestation, but I need scarcely remind you that an ovarian cyst, a fibroid of the womb, ascites, the deposition of fat in the omentum or abdominal walls, may present pretty much the same appearance, and, as I have already pointed out, a nervous or hysterical woman may balloon her abdomen out until it looks very much like this. In addition to the changes in the size and shape of the abdomen we note other signs of some value. For example, the pigmentation. Even in a woman of this type, a delicate line of pigment runs along the linea alba, encircling the umbilicus. Note also that the umbilicus, instead of being depressed, is flush with the rest of the abdomimal wall. Ordinarily, however, the navel actually pouts at this period of gestation. Any abdominal tumor may produce the same effect, but always remember that by far the most common abdominal tumor is a pregnant womb.

As I look at this woman I may elicit a sign of pregnancy which is far more important than any we have yet discovered. It is the movement of the fœtus in the womb. I prod the abdomen with my fingers, and, for the first time, I detect a certain sign of her condition. There is nothing else inside the abdominal cavity which can move like that. When you see it the diagnosis is made at once. Notice on the one side how the abdominal walls are sharply projected outward by the tap of the fœtal feet or knees, and on

the other, how the fœtal back is heaved upward, giving a wave-like motion to the abdominal walls. This sign cannot always be elicited in pregnancy. It is not available till the latter months, and the fœtus may be dead and yet pregnancy exist. The fœtus, further, may be so ill developed as not to possess the power to move itself in this way, there may be too much liquor amnii to appreciate the movements, and, finally, the fœtus may be compressed, by external pressure, and thus the movements be prevented. It is a good dodge in cold weather to put your hand on the cold window pane and then place it on the woman's abdomen; it will give both her and the baby a violent shock, so that the movements will be active and easily seen. Still assuming that we are not certain of the woman's condition, we will proceed with our routine examination. There is only one other symptom which appeals to our sense of sight—the blue discoloration of the vaginal mucous membrane. The value of this sign was pointed out by Dr. Chadwick, who in an examination of 281 women found it present in every case late in gestation. It was, however, only detected in 13 per cent. of cases in the first few months.

Having exhausted the symptoms which appeal to our sense of sight, we will now take up those which we can appreciate by touch. I will divide them into those signs which are detected by abdominal palpation and those which are found in a combined examination. In the first place, as to abdominal palpation: By running my finger tips along the abdomen in this way I detect in the abdominal cavity a tumor of characteristic size and shape; moreover, my fingers detect the characteristic features of the fœtal body. I feel an extremity, or foot, here; by turning around in this manner I grasp the head. In a plain case of this kind the diagnosis may be made at once; but there are many abdominal tumors which may resemble very closely a pregnant uterus, and there are cases of pregnancy in which the size and shape of the uterus are abnormal, and in which the fœtus cannot be detected by palpation. So, while these signs, when they are detected, are very valuable, they are sometimes absent altogether. While palpating the abdomen, I have felt the fœtal movements, which we have already seen. This is again a positive sign. The movements of the intestines have been mistaken for fœtal movements, but this error should not be made by any one of experience.

Finally, if I allowed my hand to rest flat upon the abdominal surface, I would detect another very valuable sign of pregnancy. At intervals of about ten minutes, throughout the whole course of gestation, the uterine muscle contracts distinctly and firmly. I feel that contraction now occurring. Why this should be we are in ignorance, but that it does occur there is no dispute. In any tumor distending the uterus, we feel this action of the uterine muscle; while, therefore, its value is great, it is not an absolutely safe sign.

By the combined examination we detect the following symptoms of gestation: Increase in size of the uterine body, with a boggy feel; marked softening of the cervix till it feels like one's lips instead of like the tip of one's nose; the softening and elongation of the lower uterine segment, which is best felt with the forefinger in the rectum and the thumb in the vagina, while the other hand presses the uterus down from above (Hagar's sign); and ballottement. These symptoms, except ballottement, may be found in a few conditions other than pregnancy. The last is certain in experienced hands. The symptoms discovered by a combined examination are most valuable in the early months. At the date which this pregnancy has reached a vaginal examination could elicit ballottement, but, in addition, the presenting part could very likely be distinguished through the anterior vaginal vault.

We come now last of all to the signs of pregnancy which present themselves to the sense of hearing. They are two in number —the fœtal heart sounds, and the dullness on percussion over the uterine tumor. Knowing now the importance of the first sign and the ease with which it can be detected, it is astonishing to learn that it was first discovered in 1818 and first publicly described in 1821. It is, of course, a certain sign of pregnancy when it can be heard, but the beat of the abdominal aorta has been mistaken for it, it cannot be heard when the

fœtus is dead, and in a few rare cases it is impossible to hear it when the fœtus is alive and well developed. Under ordinary circumstances it is not available before the fifth month, and often not until after the sixth.

There is naturally dullness on percussion over the tumor of a pregnant uterus. It is well to remember this when one has to deal with a hysterical woman who inflates her abdomen and simulates pregnancy. In her case a few taps on the abdomen and the tympanitic note which they call forth dispel at once the idea of advanced gestation. Under this heading I omit the "uterine souffle" and the "placental bruit," for they do not necessarily indicate pregnancy.

These, then, gentlemen, are all the symptoms of pregnancy on which we can rely in making a diagnosis. If in every doubtful case you would follow the routine plan just mapped out, it is highly improbable that you will make a mistake. There are very few cases indeed that cannot be diagnosticated. But just as surely as you grow careless or over-confident, just so surely will you fall into an error which may have the most serious result. Death has often resulted from this mistake because of an operation which has been undertaken for a supposed pathological tumor. And if the end is not so tragic for the patient, the gross blunder, as the laity will regard it, will prove disastrous to the reputation of the physician who makes it.

Philadelphia.

CARCINOMA OF STOMACH.

CLINIC BY DR. ROLAND G. CURTIN.

The patient before you is 58 years old, a widow, who has followed the occupation of a domestic for some time. After carefully examining her family history, we find that there is no evidence of cancer or any other hereditary disease. She has had nine children, and has always worked hard. She had an attack of marked jaundice four years ago, and three years ago an attack of rheumatism. Her present trouble began one year ago. She first noticed an inability to swallow solid food and a gradual failing of strength. She had vomiting and a pain in the epigastrium. She has emaciated greatly in the last three months.

Two things are to be observed in the history of this case: First, her age, and, secondly, the fact that she has rapidly emaciated during the last three months. She came into the hospital suffering with pains in the shoulders and elbows. Her arms were helpless. At that time she could eat semi-solids, but now even small quantities of milk are vomited. She vomits large quantities of mucus, and before the stomach is evacuated of this mucus there is pain in the umbilical and epigastric regions. Her bowels are constipated, and large doses of laxatives are necessary to overcome this. She is very anæmic. The resident physician has examined her blood, and found that there are a little over three million red corpuscles to the cubic millimetre, and the hæmoglobin is only 65 per cent. of normal. A glance at her temperature sheet shows that when she was admitted her temperature was 104°. In three and a half days it was down to 97°, afterwards becoming normal. About a week later it started up again, and continued elevated for several days. It is now sub-normal. No evidence of inflammation exists anywhere.

We will now examine her abdomen, to see if we can find a cause for the stomachic conditions that exist. Vomiting, with loss of flesh and anæmia, may be caused by a number of diseases. Her age is 58, and the disease seems to be growing progressively worse. Upon palpating the lower part of her abdomen, I find some hardening. It feels like scybala, and from the fact that her bowels had been obstinately constipated, I am satisfied that such is the case. A little to the left of the median line, just above the umbilicus, I find a tumefaction about the size of a small egg, which pulsates under my finger. It seems to be alongside of the abdominal aorta, and I can feel a sulcus, but they seem to be joined together and firmly fixed.

When I put my finger on the outside of the tumor there is some little pulsation, the finger moving away from the aorta. I now apply my fingers above and below the little tumor, and I find that my fingers are only raised anteriorly, there being no lateral pul-

sation. I now place my finger behind the tumor, and no pulsation is felt in that locality such as we would naturally expect to find in an active aneurism. I now place my stethescope over the tumor, and no sound like a bruit is heard. In this connection I would caution you, when examining an abdominal aorta, not to press too hard. If you should, you would be liable to compress the aorta and produce a false bruit. Many mistakes are made in this way. There is a little soreness complained of by the patient when I press upon the nodule under examination. I again apply my hand over the tumor, and ask the patient to take a long breath. It does not move up and down with the diaphragm, as it would if attached to any of the organs immediately connected with the diaphragm.

What is this small tumor? It is one of two things—either a gland or nodule of cancerous material, alongside of and joined to the aorta, or else a cured aneurism; that is, an aneurism which is filled up with clots, so that there is simply a channel the size of the aorta. Hence the absence of a well-defined pulsation, bruit, and thrill.

No other evidence of unnatural induration is found in any portion of the abdominal cavity. I ask her if she ever vomited blood. She answers that she has not. She has never vomited anything like coffee-grounds. I ask this second question because blood which has been acted upon by the gastric juice becomes dark and grumous, resembling coffee-grounds, and when this substance is present, it is as much an indication of a hæmorrhage as if it were pure, red blood.

Could we have carcinoma, or ulceration of the stomach, without hæmorrhage from the stomach? There are cases of acute and chronic carcinoma of the stomach, as well as ulcer of the same organ, which begin and end without any tendency to hæmorrhage. It all depends upon the erosion of blood vessels. If this does not take place, hæmorrhage is absent. In ulcer of the stomach,we are more liable to have hæmorrhage than in carcinoma. Now, the question for us to decide is whether this woman has carcinoma or ulcer. The symptoms are largely in favor of carcinoma. The progressive course of the disease, the extreme emaciation, and these associated with a small tumor below the epigastrium, all point in that direction. How shall we treat a case like this? The most important indication is to arrest the starvation process going on with steady march. How shall we give her nourishment while the stomach fails to absorb the food introduced into it? This can be done by nutritive injections into the bowel. We can in this way use milk, liquid peptonoids, beef essence, or defibrinated blood.

Dr. A. H. Smith, of New York City, has experimented extensively with the last named article, and considers it the best of all such nutritive substances. It is more readily absorbed, and requires less change before assimilation. You must be careful not to give too much food by the rectum, Three ounces is the limit in the case of most persons, and six times a day, or every four hours, is as often as the bowel will admit of, irritability even following its use when given only twice a day, and some bowels are much more sensitive than others. This should govern you in the number of injections given, for if you should produce an irritability that would render the bowel unable to retain injections, this avenue for alimentation would be lost. The great loss of flesh in this case is due largely to the fact that fats are rejected by the stomach before they are absorbed by the intestine. We would have the chest and abdomen of this patient rubbed with olive oil daily, at least ten minutes, a few drops being put on the skin and friction used until it is absorbed. This process should be repeated several times. In this way fat can be introduced into the system without disturbing the stomach. If this were gastric ulcer, the patient's condition might be benefited by this treatment until the ulcer should be healed. In this case it is given simply to prolong life, and make the patient more comfortable. I will order for the stomach peptonized, skimmed milk and beef essence, in very small quantities. These substances contain very little that is not absorbed by the stomach; consequently very little is left to disturb that organ and cause pain. Compound rhubarb pill is a very good laxative for the bowels in these cases.

Philadelphia.

Correspondence.

WESTERN ASSOCIATION OF OBSTETRICIANS AND GYNÆCOLOGISTS.

TOPEKA, KANSAS, Dec. 29th, 1891.

By special request a goodly number of physicians from Kansas, Colorado, Nebraska, Missouri, New Mexico, Arizona, Oklahoma, and Minnesota met at the Copeland Hotel parlors, Topeka, Kansas, Dec. 29th, 1891, for the purpose of organizing the Western Association of Obstetricians and Gynæcologists.

The following physicians were the charter members of the association: Drs. W. H. Buchtel, Clayton Parker, T. H. Hawkins, and John Boise, Denver, Col.; P. S. Leisenring and J. E. Summers, Jr., Omaha, Neb.; L. Schooler and T. J. Shreves, Des Moines, Ia.; J. Geiger, C. R. Woodson, J. W. Heddins, and J. M. Richmond, St. Joseph, Mo.; G. C. Masher, J. D. Griffith, C. W. Adams, T. J. Beattie, J. H. Van Eman, and B. T. Whitmore, Kansas City, Mo.; W. R. Mitchell, J. C. McLintock, G. E. Sheldon, and Mrs. I. C. Barnes, Topeka, Kas.; Jos. Boice and A. J. Cordier, Philadelphia, Pa.; Andrew Sabine, Garden City, Kas.; J. G. Stewart, Hutchinson, Kas.; M. M. Wachter, Baileyville, Kas.; L. J. Lyman, Manhattan, Kas.; Jeffrey Martin, Marion, Kas.; W. T. Sawhill, Concordia, Kas.; H. Humfreyville, Waterville, Kas.; J. A. Axtell, Newton, Kas.; L. A. Buck, Peabody, Kas.; A. H. Toboique, Wichita, Kas.; L. H. Warren, Clay Center, Kas.; Wm. Dewerse, Salina, Kas.; J. H. Sutherland, Liberal, Kas.; J. A. Mitchell, Arkansas City, Kas.; J. W. McCracken, Sterling, Kas.; W. R. Tipton, Las Vegas, N. M.; M. B. Ward, Tipton, Kas.; T. W. Scott, Stafford, Kas.

Dr. S. S. Todd, Kansas City, Mo., was on motion elected temporary chairman of the meeting, and Dr. Jeffrey Martin, secretary. After some appropriate remarks by Dr. Todd, a committee of three was appointed to draw up the constitution and by-laws of the society, and Drs. T. J. Shreves, Des Moines, Iowa; M. B. Ward, Topeka, Kas.; and T. W. Scott, Stafford, Kas., were appointed such committee. Drs. L. J. Lyman, T. J. Beattie, and M. R. Mitchell were appointed a committee on permanent organization and place and time of holding the first annual meeting.

Dr. T. J. Shreves, of Des Moines, Iowa, delivered many useful suggestions as to the formation of this society. He favored in the strongest terms the contemplated step to organize the society. Drs. Morgridge, Lyman, Mitchell, Stewart, Ward, Todd, Beattie, Summers, Jr., Parkhill, and Mrs. I. C. Barnes cordially endorsed its formation.

Drs. J. E. Minney and Schenk spoke of the importance of specialism as developing men in their various lines, as nothing else can, and advocated that the Society leave its doors sufficiently wide to admit all who desired to become more perfect in obstetrics and gynæcology. Dr. Rogers urged that, while it was important to keep the doors open to a certain extent, yet he advocated the drawing of a distinguishing line that will make it sufficiently exclusive, so that all papers read before the Association would be in keeping with the name of the organization.

Dr. Martin expressed his approbation of the name by which the Society is to be known, defining the western medical man as being "an eastern medical man spread out," having the culture and ability of the eastern man, coupled with the progressiveness of the western.

Dr. Sutherland, of Liberal, spoke of the importance of self-development and then of self-reliance, as specialists are not always within reach when they are badly needed; and Dr. Mitchell thought that the necessary qualification to become a member should be: "I want to learn."

When the evening meeting was called to order at 8 o'clock, the name, Western Association of Obstetricians and Gynæcologists, was agreed upon, and Dr. M. B. Ward, Tipton, Kas., was elected president, and Dr. T. J. Beattie, Kansas City, Mo., secretary. The next place of meeting will be Kansas City, Dec. 27th, 1892.

REPORT OF MICHIGAN STATE BOARD OF HEALTH.

At the meeting of the State Board of Health, Jan. 12th, Drs. Avery, Gray, Baker, Hon. Frank Wells, and Prof. Delos Fall were

present. The committee who have been investigating the different branches of work carried on in the office of the Board, to see whether any of the lines of work should be cut down or extended, made a voluminous report of all the details of the work. The long and careful examination of the committee reveals no work which could be profitably stopped or abridged. At the conclusion of the report the committee says: "Finally we are glad to note the general efficiency of the clerical force of the office and the conscientious efforts made by them in the performance of their duties."

The committee thought that more effort should be made to convey a knowledge of the work of the Board to the people of Michigan through the valuable medium of the press.

In connection with the report of the committee, the secretary gave an outline of the History of the Development of Sickness Statistics, and showed that at the present time the sickness statistics collected and compiled by the Michigan State Board of Health are more valuable than those of any other country or state; he also illustrated the valuable use made of these statistics in the study of the causation of disease.

During the last quarter, the accessions to the library of the Board, principally in exchange for the publications of the Board, were 118 sanitary books and pamphlets, and 337 numbers of sanitary journals. Aside from postal cards, printed circulars, etc., not copied in the letter books, 1,210 pages of letter books have been used in correspondence relative to the restriction of dangerous diseases, etc., and 2,116 pages have been hektographed for more general distribution.

During the quarter, 501 outbreaks of dangerous communicable diseases were reported, and action was taken to restrict them.

LANSING, Jan. 13th, 1892.

A collective exhibit of sanitary appliances and methods of sanitation is to be made at the Columbian Exposition. The various State and municipal Boards of Health will work in conjunction to that end, numerous representatives of those organizations having so decided at a recent convention in Chicago.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

B. W. PALMER, A. M., M. D., Editor.

—PUBLISHED BY—

GEO. S. DAVIS, Medical Publisher, Box 470.

DETROIT, MICH., JAN. 25, 1892.

Editorial.

THE PHYSICIAN'S FINANCIAL STATUS.

It is a well known and deplorable fact that few physicians attain a degree of financial success which enables them at their demise to leave their families well provided for.

It is usually contended that the ideal physician should be more or less of a philanthropist or humanitarian, and one result of this impression is to make the doctor's patients careless of attending to the doctor's fee.

The fact that the physician himself is often a most inefficient business man helps to foster and perpetuate the laxity of the public in settling his bills.

The medical press has frequently urged upon the profession the necessity of establishing medical practice on a business basis, but has done much moralizing without pointing out specific methods which will lead to this much-to-be-desired result.

It is gratifying, therefore, to note that a recent contribution to this subject* has crystallized in a little book of 143 pages, many admirable suggestions as to how the physician may improve his financial status, prescribing feasible remedies for the relief of doctors' impecuniosity.

Among the topics discussed by Dr. Taylor are: Account Books, Bill Forms, Business Rules, Collections, Credit, Fees, Co-operation in Expenses and in Collections, Effects of Hospitals and Dispensaries, Money Value of the Profession, Remedy for Free Treatment, Sporting Practice, Sunday Work,

*The Physician as a Business Man, or How to Obtain the Best Financial Results in the Practice of Medicine, by J. J. Taylor, M. D., published by the Medical World, Philadelphia, Pa.

Qualifications Essential to Success in Practice, Interest on Long Accounts, Gratitude as an Acute Symptom.

The re-agitation of this question has excited very general press comment as to the means of improving the financial status of the physician. Among remedies advised are:

The limitation of the number of new doctors by the rigid examination of all applicants for practice, the more general establishment of state examinations, the exaction of a preliminary education for matriculants, and a more thorough course of instruction.

The editor of the Dietetic Gazette, in considering the financial prospects of the physician, thinks a better *entente* should exist among the members of the profession. They should imitate the trades unions, who pass general laws for the protection of their members, and who adhere to them to the bitter end. Worthy, struggling practitioners should be helped, just as the worthy mechanic is helped, out of a common fund, if his necessities arise, as they often do, from his strict adherence to the rules of the medical guild.

If this were done there would be fewer breaches of the ordinary rules of professional etiquette. As it stands now, the young physician, who regards the latter as sacred, is pressed aside, aye, trampled down by the more eager and unscrupulous colleague. Something should be done to enhance the solidarity of the medical profession; to weld it into a guild with noble aims and aspirations, but with a determined, practical regard for its material interests.

The road to a comfortable income from the pursuit of medicine should be and may be made less stony and impassable, in order that young men and older ones, too, may be willing to devote some of their time to the advancement of knowledge. The lay people should be taught in season and out of season the illimitable value of the physician's work, and the necessity of compensating him less grudgingly. It cannot be denied that a proper and constant agitation of this subject would lead to much advantage to the doctor even in this practical, utilitarian, money-hunting age.

THE INTERNATIONAL EXECUTIVE COMMITTEE OF THE PAN-AMERICAN MEDICAL CONGRESS.

We have received from Charles A. L. Reed, M. D., of Cincinnati, Secretary General of the Pan-American Medical Congress the following announcement:

The Committee on Organization of the Pan-American Medical Congress, at its meeting at St. Louis last October, elected the following International Executive Committee: The Argentine Republic, Dr. Pedro Lagleyze, Buenos Ares; Bolivia, Dr. Emelio Di Tomassi, La Paz; Brazil, Dr. Carlos Costa, Rio de Janeiro; British North America, Dr. Jas. F. W. Ross, Toronto; British West Indies, Dr. James A. De Wolf, Port of Spain; Chili, Dr. Moises Amaral, Santiago; United States of Colombia, Dr. P. M. Ibañez, Bogota; Costa Rica, Dr. Daniel Nuñez, San José; Ecuador, Dr. Ricardo Cucalon, Guayaquil; Guatemala, Dr. José Monteris, Guatemala Nueva; Hayti, Dr. D. Lamothe, Port au Prince; Spanish Honduras, Dr. George Bernhardt, Feguagalpa; Mexico, Dr. Tomas Noriega, City of Mexico; Nicaragua, Dr. J. I. Urtecho, Grenada; Peru, Dr. J. Casamira Ulloa, Lima; Salvador, Dr. David J. Guzman, San Salvador; Spanish West Indies, Dr. Juan Santos Fernandez, Habana; United States, Dr. A. Vander Vier, Albany, N. Y.; Uruguay, Dr. Jacinto De Leon, Montevideo; Venezuela, Er. Elias Rodenguez, Caracas.

Hawaii, Paraguay, Santo Domingo, the Danish, Dutch and French West Indies are not yet organized. Nominations of local officers have been received from a majority of all the members of the International Executive Committee, and a number of the lists have been confirmed by the Committee on Organization. These will be announced as rapidly as acceptances are received.

AMERICAN MEDICAL ASSOCIATION.

The Committee of Arrangements afford the following information concerning the next meeting in June, 1892. The gentlemen who constitute the various committees are:

Executive.—H. O. Walker, Chairman; F. W. Mann, Secretary; T. A. McGraw, J. H. Carstens, Leartus Connor, Donald Maclean, C. G. Jennings, David Inglis, E. L. Shurly, H. W. Longyear, H. F. Lyster.

Registration.—David Inglis, Chairman; C.

W. Hitchcock, Angus McLean, S. G. Minor, Don. M. Campbell.

Finance.—E. L. Shurly, Chairman; J. B. Book, S. P. Duffield, E. A. Chapoton, J. E. Clark, W. P. Manton, Charles Douglas.

Entertainment.—Donald Maclean, Chairman; H. A. Cleland, T. A. McGraw, G. A. Frothingham, Eugene Smith, C. J. Lundy.

Transportation, Hotels, etc.—H. F. Lyster, Chairman; W. G. Henry, A. E. Carrier, O. S. Armstrong, W. F. Metcalf.

Reception.—Leartus Connor, Chairman, Detroit; G. A. Frothingham, Detroit; C. G. Jennings, Detroit; E W. Jenks, Detroit; Hal C. Wyman, Detroit; Carl Brumme, Detroit; G. W. Stoner, Detroit; A. W. Alvord, Battle Creek; J. Avery, Greenville; H. B. Baker, Lansing; E. O. Bennett, Wayne; Lyman Bliss, Saginaw; E. H. Pomeroy, Calumet; G. E. Ranney, Lansing; Chas. Sheppard, Grand Rapids; J. M. Snook, Kalamazoo; C. B. Stockwell, Port Huron; Eugene Boise, Grand Rapids; Fleming Carrow, Ann Arbor; E. P. Christian, Wyandotte; W. H. Decamp, Grand Rapids; Geo. Dock, Ann Arbor; S. S. French, Battle Creek; J. B. Griswold, Grand Rapids; F. J. Groner, Grand Rapids; W. J. Herdman, Ann Arbor; G. K. Johnson, Grand Rapids; T. J. Langlois, Wyandotte; H. D. Thompson, Albion; A. A. Thompson, Flint; V. C. Vaughan, Ann Arbor; G. V. Voorhees, Coldwater; R. LeBaron, Pontiac; C. H. Lewis, Jackson; Kate Lindsay, Battle Creek; H. McColl, Lapeer; W. J. McHench, Brighton; H. R. Mills, Port Huron; J. D. Munson, Traverse City; R. N. Murray, Flint; A. W. Nichols, Greenville; J. D. North, Jackson; P. D. Patterson, Charlotte; D. C. Wade, Holly; D. E. Welsh, Grand Rapids; H. Williams, Saginaw; D. H. Wood, Quincy.

Place of Meeting of Sections.—J. H. Carstens, Chairman; J. J. Mulheron, J. E. Emerson.

Information.—H. W. Longyear, Chairman; W. B. Sprague, C. P. Frank.

Exhibits.—H. O. Walker, Chairman; F. W. Mann, C. G. Jennings.

Printing.—Geo. Duffield, Chairman; C. H. Leonard, W. R. Chittick, L. E. Maire.

Railroad Depot.—B. P. Brodie, Chairman; D. L. Parker, F. W. Robbins.

THE COLUMBIAN WORLD'S CONGRESS OF PHARMACISTS.

A comprehensive series of World's Congresses will be held at Chicago during the season of the World's Columbian Exposition of 1893. It will be a series of congresses such as never before has been attempted, and the World's Columbian Exposition has made correspondingly ample preparations. These Congresses will be of a dual character, some of their sessions being devoted to popular addresses of general interest, and others to the discussion of living questions such as the specialists who compose the several respective congresses may present.

The majestic new Art Palace, the erection of which, on Chicago's beautiful "lake front," is to be immediately commenced, and which is to cost $800,000, will be used during the exposition season exclusively for the World's Congresses referred to, and for other conventions and meetings which the Auxiliary will be able to accommodate.

The Auxiliary has provided for World's Congresses of all kinds of specialists, and there will be, among others, a Columbian Word's Congress of Pharmacists.

The World's Congress Auxiliary, through its committee, also invites the International Pharmaceutical Congress, the American Pharmaceutical Association, all of the State Pharmaceutical Associations, and Boards of Pharmacy, and the Colleges and Schools of Pharmacy, to meet in Chicago at about the same time, so that they may all interchange visits with each other, and that the participants in one may also participate in one or more of the other meetings, while all may come together in the Columbian World's Congress of Pharmacists.

The Seventh International Pharmaceutical Congress will probably be called to meet at the same time and place. There will be no conflict whatever between it and the Columbian Pharmaceutical Congress. Preliminary correspondence between the American Pharmaceutical Association and the representatives of the Sixth International Pharmaceutical Congress has been going on for some time, and it is hoped that the Special Committee of the Association will be enabled at an early day to enter actively upon its duties to arrange the preliminaries in cooperation with the World's Congress Auxiliary of the World's Columbian Exposition.

It will be seen that the members of the Pharmaceutical Committee of the World's Congress Auxiliary are all members also of the Special Committee of the American

Pharmaceutical Association on the International Pharmaceutical Congress.

Individuals as well as societies and other organized bodies of pharmacists who intend to participate in the Columbian World's Congress of Pharmacists or in other proposed pharmaceutical meetings in Chicago during the season of the World's Columbian Exposition, and those who may be disposed to contribute papers suitable to be read before the Congress, are requested to inform the Chairman of this Committee, to whom all communications, proposals, papers, and letters of inquiry should be addressed, in care of the World's Congress Auxiliary of the World's Columbian Exposition. Oscar Oldberg, chairman; E. H. Sargent, Albert E. Ebert, D. R. Dyche, L. C. Hogan.

FURTHER DEVELOPMENT OF THE A. M. A.

Dr. Leartus Connor, Chairman of the Section of Ophthalmology of the American Medical Association, in a paper read before that Section, and published in the Journal of the Association, August 25th, 1891, points out the extraordinary growth of that Section, as is evidenced by its very complete report of its last proceedings, a volume of 380 pages, ably edited, comprising many admirable papers, and handsomely printed and bound.

Dr. Connor very justly contends that the hours of meeting of the Association should be so arranged that papers presented may be read and discussed as their merits demand. To aid in this, he thinks it desirable to shorten the general sessions of the Association, and refer all subjects for consideration, that can appropriately be so dispatched, to committees.

A further proposed purpose, the accomplishment of which he thinks would profit the Association is, for the dispatch of general business, to form a Council, consisting of three representative men of each Section; that such Council be authorized to control the appointment of trustees, who manage the Journal and the Nominating Committee.

Such steps are certainly in the direction of more definite and perfect organization, and are worthy the careful consideration of this great national organization.

Book Notices.

THE PHYSICIANS' HANDBOOK.—By Albert D. Elmer, M.D. Published by G. P. Putnam's Sons, New York.

Thoroughly revised for its first time in its thirty-four years of existence, the issue of this well-known work for the current year is to hand, with every inch between its neat covers packed with useful information and facilities for professional records.

PRIZES FOR ESSAYS ON AERIAL NAVIGATION.

The Cosmopolitan offers $500 in prizes for three essays upon aerial navigation:

1st. $250 for the most valuable paper suggesting the best methods of accomplishing the navigation of the air.

2d. $100 for the second most valuable essay on the same subject.

3d. $150 for the best paper on the result which successful aerial navigation would have upon the moral and material interests of the world.

The papers to be in the possession of the Cosmopolitan before February 1st, 1892.

DIAGNOSIS AND TREATMENT OF HEMORRHOIDS AND OTHER NON-MALIGNANT RECTAL DISEASES. By W. P. Agnew, M.D. Second Edition; pp. 148. Published by the Author, San Francisco, Cal., 1891.

In this useful and well-arranged handbook Dr. Agnew vigorously champions the claims of carbolic acid injection to take first place among the various treatments in vogue for the relief of hæmorrhoids and non-malignant rectal diseases. Students will find in this little book valuable aid in the intelligent treatment of rectal troubles, for Dr. Agnew has contrived to compress a large amount of helpful information into concise and readily assimilated form.

TALES FROM TOWN TOPICS, No. 2.

The second volume of "Tales from Town Topics" has appeared with the announcement in a preface that the first volume enjoyed a "phenomenal" sale, and that the publishers expect the new book to prove quite as popular. It is doubtless true that a large body of the public reads with avidity a book that contains stories told with a French degree of freedom, and, so long as a literary purity is preserved, who shall say them nay? "Tales from Town Topics, No. 2," contains some startling pages, judged under austere rules, but the book is seldom stupid, and can be read by broad-minded men and women without seriously influencing the health of of their souls.

Notes and News.

A New System of Medicine.—

Harper's Bazar is responsible for the following:

He was a doctor of the advanced school. He laid his finger on my pulse. "Strong, 74," he said. Then he consulted a card that was covered with figures, and continued: "That equals 63. Put out your tongue. Good! That is 14. How is your appetite?"

"Equal to the supply."

"That makes 204," he replied. "Cold feet?"

"Yes," I answered.

"Three," he said.

He then placed a thermometer in my mouth, which he afterward consulted in connection with the card.

"A good 198."

He wrote down the 198, and asked if I had headaches.

"After being kept late at the office," I answered.

"Four," he said. "Do you smoke?"

"Yes."

"Ten," he replied.

He added together the figures that he had placed on the slate. "That makes 496," he said.

"Is that the amount of the bill?" I asked.

"Bill?" he replied. "That is the number of the prescription. I want you to know that medicine with me is no longer an experiment, for I have reduced it to a mathematical certainty. Every symptom has its number, and the sum of these numbers indicates the medicine that is needed. I have worked for fifteen years in formulating my prescriptions and perfecting the treatment, but I have it now. Your bill is $10."

I understood that number, and left the office feeling relieved and deeply impressed by the doctor's learning.

Vaccination as a Prophylactic against Influenza.—

Dr. Goldschmidt (of Madeira) some time ago adduced evidence (Berlin Klin. Woch., November 19th, 1890) that vaccination had a prophylactic influence as regards influenza. Goldschmidt observed 210 cases of revaccination, 112 being successful. Out of the 98 without result, only 15 contracted influenza, and even these were very slight cases. In an isolated villa with 26 inmates, of whom 14 were not revaccinated, all the latter were attacked with influenza, in two cases very dangerously; while all those who had been revaccinated remained free. In a recent paper Goldschmidt presents further evidence in support of his view.

A Keeley Cure.—

The siren of the flowing bowl,
With rose-red lips and magic fell,
Long years ago about the soul
Of young Augustus cast her spell.

She lured him on from bad to worse,
Till he was in a grievous plight,
And friends, to rid him of the curse,
Sent him a year ago to Dwight.

And there bi-chloride's golden lash
Was laid about him day and night—
Ah, well, he doesn't need the cash
He crowded in the slot at Dwight.

He'll ne'er regret he let it slide,
He'll never want his boodle back—
In a fit of "snakes" last week he died,
A raving dipsomaniac.

—*Tommy Dod.*

Artificial Foods versus Mother's Milk for Infants.—

E. E. Furney, M.D., in an article on the Hygiene of Infant Life (Weekly Medical Review, Dec. 19th, 1891) announces a discovery that will be a revelation to those who have regarded mother's milk as the most eligible diet for infants. He says:

Every woman who loves her offspring ought to be taught the truth that woman's milk is an unsafe food.

Almost any cooked food, if cleanly prepared and administered, is safer than woman's milk.

Shades of Galen and Hippocrates, what are we coming to? Is the mammary gland to become rudimentary only? If the breast and ovaries are both to go, what will become of the woman of the future?

Alvarenga Prize of the College of Physicians of Philadelphia.—

The College of Physicians of Philadelphia announces that the next award of the Alvarenga Prize, being the income for one

year of the bequest of the late Señor Alvarenga, and amounting to about one hundred and eighty dollars, will be made on July 14th, 1892. Essays intended for competition may be upon any subject in medicine, and must be received by the Secretary of the College on or before May 1st, 1892. It is a condition of competition that the successful essay, or a copy of it, shall remain in possession of the College.

Hospitals at the World's Fair.—

At the World's Fair there are to be two special hospitals. One of these is to be under the direction of Dr. Owen, and is to be the official hospital of the Exhibition; the other is to be a model hospital in the Woman's Building. In connection with this model hospital will be the Department of Public Comfort, where couches and beds will be provided for such cases of accident or indisposition as do not need serious medical attention.—*Medical Record.*

The United States Medical Practitioners' Protective Alliance.—

The Maryland Medical Journal says that this "Alliance" has not made itself known to the leading physicians there, and sounds a note of warning to those who may contemplate paying $3 for a membership. The "President" of the "Alliance" was expelled from the Medical and Chirurgical Faculty of Maryland in 1890, and seems to be in "bad odor" with the profession in that State.

To Vaccinate or Not.—

To vaccinate or not? That is the question;
Whether 'tis better for man to suffer
The painful pangs and lasting marks of small-pox,
Or to bare arms before the surgeon's lancet,
And by being vaccinated end them? Yes,
To feel the tiny point, and say we end
The chances of many a thousand scars
That flesh is heir to. 'Tis a consummation
Devoutly to be wished. Ah! soft you now,
The vaccination! Sir, upon your rounds,
Be my poor arms remembered.

—*Puck.*

Urethritis of Malarial Origin.—

F. Moscato (Revista Especial de Oftalmologia, Dermatologia, Sifiliografia y Afecciones Urinarias, No. 7, 1891) in an interesting study of the localizations of malaria cites the peculiar case of a man, seventy years of age, in which, during the course of an attack of malaria fever, there developed without any apparent cause, urethritis with pain on micturition. It disappeared as soon as the fever terminated.

An International Congress for the Study of Prostitution.—

The Paris Municipal Council is about to organize an international congress for the study of questions relative to prostitution and the spread of venereal diseases. It is proposed to hold the congress in Paris in 1893. Not only medical authorities, but jurists, hygienists, and political and social economists will be asked to take part in it.

Fecundity in Michigan.—

A Michigan correspondent informs us of a lady who in two years and fourteen days gave birth to six children. Beginning with one the first labor, she had triplets the second, and twins the third. All are living but two of the triplets, who died when three months old.

William H. Long, M. D.—

Surgeon Wm. H. Long, of the U. S. Marine Hospital Service, died at the Marine Hospital, Cincinnati, O., January 5th, 2892. Dr. Long was formerly in charge of the Marine Hospital at Detroit, and was Emeritus Professor of Military Surgery at the Michigan College of Medicine.

Change in Editorship of the American Journal of Obstetrics.—

Dr. Paul F. Munde has retired from the editorial control of the American Journal of Obstetrics. Dr. Brooks H. Wells is his successor.

The New York Academy of Medicine Increases Its Annual Dues.—

At the meeting of the New York Academy of Medicine, December 3d, 1891, it was decided to raise the dues from ten to twenty dollars a year to meet the necessary expenses.

Therapeutic Brevities.

Hygiene of Infancy.—G. N. Highley, in the Medical and Surgical Reporter, suggests the following rules:

Use every reasonable effort to have the mother nurse her child. If this is impracticable, endeavor to obtain a supply of pure cow's milk twice daily, if possible. Use the best means possible to protect the milk from fermentative changes. Use the following mixture, if possible: For an ordinary eight-ounce nursing-bottle: Milk, one ounce; lime-water, one-half ounce; cream, one and a half ounces; milk sugar, one-half ounce (three and a half drachms); water, four and a half ounces. Otherwise give the milk pure, or simply diluted with water and a little lime-water. Give it at regular intervals and never at shorter intervals than three hours. A single feeding should not occupy over half an hour; nor, on the other hand, should the milk be taken too rapidly. After using, the feeding-bottle should be thoroughly scalded and cleansed. Clothe the infant lightly in hot weather. Bathe it frequently, using soap sparingly. Keep it in the outside air as much as possible, especially in the early morning and the cool of the evening. Above all, remember that heat is a most important factor in the causation of disease.

Ice Cream Diet in Gastric Ulcer.—F. P. Warner, M.D., reports in the New York Medical Times a case in which a patient who was told she could live but a short time was put on ice cream diet. The patient gradually increased the quantity of it till she took as high as three and four quarts during the twenty-four hours. This was the only article of food for fifteen months, patient gradually improving until now the thickening and hardening has all disappeared and she can take other plain articles of food, as bread, vegetables, meats, etc. When the diet of ice cream was begun, patient was cadaverous, emaciated, and confined to bed. Now she is plump, strong, doing a good deal of work, and has gained about thirty pounds. The ice cream was made at her own home of good, fresh, unskimmed milk, each day's allowance containing from six to eight eggs, very little sugar, and flavored with anything to suit her taste, as vanilla, lemon, bananas, peaches, and different kinds of berries, etc.

Hypodermic Medication in Diseases of the Eye.—C. L. Lundy regards hypodermic medication the most valuable in securing the effects of medicine in eye diseases. For his belief he assigns the following reasons:

The medicine does not escape through some natural channel before it has entered the circulation, as often takes place by the mouth. The dose can be regulated with greater accuracy, and the action of the drug is more certain. The full physiological effect can be obtained almost instantly, because the remedy is more quickly diffused through the system, which with drugs like strychnia and pilocarpine is most important. In some instances results can be obtained which cannot be by any other. Ptyalism never follows the hypodermic use of mercury. When medicines are not well borne or produce unpleasant symptoms, hypodermic medication in appropriate cases will meet every indication.

The Japanese Hot Box the Best Means of Applying Dry Heat for Relief of Eye Inflammations.—Julian J. Chisholm, M. D., of Baltimore, in Annals of Ophthalmology and Otology, January, 1892, describes this method. He states:

In many cases the relief of pain is magical. In old persons I have avoided the necessity of removing painful eyes lost by glaucoma by the use of the hot box. Previous to its application the disease had resisted both iridectomy and medication local and general.

The Japanese hot boxes and cartridges can be found at all Japanese stores and are also kept by many druggists. They commend themselves for their convenience, simplicity, economy, cleanliness, and efficiency as an application for the relief of pain.

Valerianic Ether as an Antispasmodic.—J. D. Christman, M. D., in Medical Bulletin, January, 1892:

As a prompt antispasmodic this preparation is best dispensed in the form of a small, round capsule, containing 15 centigrammes (about 4 drops), easy to swallow and well adapted for preserving its full activity.

The valerianic ether contained in these capsules is less volatile than ordinary ether, its effects are more energetic and permanent, while it is certain in its action and more convenient to administer than valerian.

Dr. Christman has used it in hay fever, asthma, and in various neurotic affections, and finds the action always prompt.

Treatment of Tuberculous Processes.—Landerer, in the Archiv. f. Kinderh., states:

An excellent anti-tuberculous agent is to

be found in balsam of Peru, which has been recommended by Sayre in the tamponade of tuberculous cavities. A plaster containing 1 part of balsam of Peru, 3 of adhesive plaster mass, and 1 of wax, was found very useful in bone swellings. In fistulous processes the granulations were scraped away, balsam of Peru was introduced, and a firm scar was quickly the result.

An emulsion containing 1 part each of balsam of Peru and gum arabic, 9½ parts of almond oil, 10.7 of chlorate of potash, and 100 of distilled water, was found useful for percutaneous injections in tuberculous joints.

The Use of the Turkish Bath in Inebriety.—Charles H. Shepard, M.D., in the Journal of the American Medical Association, says: Permit me to mention one agency that accomplishes many of the results that different drugs are given to produce in inebriety, and this without the reactive effect of the drugs; an agency that never fails in time of need; that requires not to be administered by the stomach or in any unpleasant way; that is always ready, and always agreeable to the patient, and, more than that, is always delightful, soothing, and quieting to the irritated nerves. That agency is—the hot air or Turkish bath.

The Dry Poultice in the Treatment of Epididymitis.—George Emerson Brewer, M. D., in the Journal of Cutaneous and Genito-Urinary Diseases, January, 1892, reports his favorable experience with a dressing which consists in a moderately thick layer of cotton-wool applied over the inflamed testicle; this is covered by a layer of thin rubber protective tissue so fashioned that it completely incloses the diseased organ, with its edges extending on to the healthy skin of the scrotum in a manner to partly overlap, but not entirely inclose, the healthy side. This is secured by a snugly-applied gauze bandage, and the whole held in place by a suspensory.

Treatment of Influenza.—A writer in the Allg. Med. Centr. Ztg., 1891, 3021, suggests absolute rest, nutritious diet, expectorants, intestinal antiseptics, and salipyrin in the following formula:

℞ Salipyrin, 6. grammes.
Glycerin, 14. grammes.
Syr. red raspberry, 30. grammes.
Dist. water, 40. grammes.

One teaspoonful every one-quarter or one-half hour.

Medical Progress.

Food and Diet in Health and Disease.—Prof. John V. Shoemaker, A.M., M.D., contributes to the Medical Bulletin, January, 1892, a comprehensive, scholarly article, containing specific and detailed information concerning this most important subject, and many valuable suggestions, a knowledge of which cannot but be of material aid to all practitioners who appreciate the influence of adjusting diet to the individual idiosyncrasies and conditions existing in health and disease.

In considering dyspepsia, anæmia, and chlorosis, diabetes mellitus, and rachitis, conditions in which a special diet is indicated, he says:

In dealing with dyspepsia, we should endeavor by every possible means to discover the organ principally or primarily at fault. If the stomach be chiefly concerned, the patient will experience most difficulty in the digestion of albumens. Fat and starch may, in such a case, give rise to little or no trouble, being in the small intestine placed in a proper condition for absorption. Under these circumstances it is a good plan to limit, for a time, the ingestion of albuminous food, and depend principally upon the carbohydrates, with a moderate supply of fat. Restriction should not be excessively rigid, or too long prolonged. Nitrogenous aliment is absolutely demanded, and the power of the stomach is further weakened if it habitually has too little work to perform. A temporary or comparative rest, however, will generally be found of service. The patient should be directed to partake rather sparingly of animal food, and should be instructed as to those articles which are most nutritious, and which, at the same time, demand the least activity on the part of the stomach. Meats should be simply cooked, boiling or broiling being the most appropriate mode of preparation. Mutton is more acceptable than beef. Poultry and game may be allowed, and white fish, either boiled or broiled. Bread should be dry or toasted; peas and beans should be forbidden. Potatoes, rice, and dishes prepared from cornstarch, sago, or tapioca are suitable vegetable food. A little wine or whisky taken with the meals is likely to assist digestion by a stimulating effect upon the stomach. Fruits, eaten moderately, are beneficial. Albuminous food must be taken in limited quantity, when hepatic disorder prevents the secondary elaboration, which has already been described. This form of difficulty is accom-

panied by the deposit of uric acid in the urine, and often by headache, low spirits, or hypochondria, and muscular and joint pains. In this condition alcoholic drinks are usually harmful. Mealy potatoes, turnips, carrots, beets, onions, starchy food, and fruit are nutritious and relieve the disabled liver. Milk puddings will furnish a moderate supply of albumen, while white fish, poultry, and oysters may be used in order to vary the monotony of the diet.

In chronic and severe cases of indigestion, it is well to administer predigested food.

The dietetic management of the gouty diathesis must be conducted upon the principles outlined as proper in derangement of the liver, resulting in lithiasis. Starchy food, even if not readily digested by these subjects, is productive of less serious and far-reaching evil than unrestricted indulgence in nitrogenized aliment.

Anæmia and chlorosis require a regimen containing as large a proportion of albuminous material as can be utilized. It is necessary to be cautious in beginning the treatment of well-marked cases, since the stomach is apt to be intolerant. Oysters, sweet-bread plainly cooked, underdone beef, with bread, potatoes well boiled, mashed, and covered with meat-gravy, and a little ale or wine, are generally well borne, and are decidedly beneficial. It may be necessary to pave the way with some concentrated food. The drawback to the use of many of these preparations is, that, though theoretically all that is desirable in presenting the nutriment in a condensed form, yet their appearance and unpalatability excites disgust and nausea. I have found sarco-peptone and the Mosquera-Julia Food Co.'s beef-powder least open to these objections. Kumyss, likewise, serves a useful purpose in these cases, being both nutrient and mildly stimulant.

Fat should enter as largely as possible into the diet of neuralgic patients, which should, in other respects, be of a supporting and digestible character. Fat beef or mutton, vegetables containing a large proportion of oil, the oleaginous seeds, olives, and chocolate diminish the susceptibility to attacks. A similar dietary is useful in chorea and hysteria.

In diabetes mellitus the regimen is of such prime importance, and is so carefully described in the various text-books, that there exists less necessity, in a brief paper, to dwell at any length upon the subject. Starch and sugar must be denied the patient. These elements, so useful in health, become deletrious in this disease. One excellent method of treating diabetes is by the exclusive use of skimmed milk. But, as this plan is not always practicable, various dietaries, agreeing in the main, have been constructed upon the principle just indicated. Meat (with the exception of liver), poultry, game, fish and shell-fish, unthickened soups, eggs, cheese, butter, and vegetables containing little starch or sugar, such as cabbage, cauliflower, beans, turnips, asparagus, and young onions may be permitted, and nuts (excepting chestnuts). Malt liquors and sweet wines are forbidden. Potatoes, parsnips, beets, rice, carrots, farinatious foods, wheaten bread and biscuits must be avoided. As substitutes for wheaten flour, almond, bran and gluten are employed. In Bright's disease, where the blood is already charged with toxic materials, digestion and elimination being alike weakened, we must scrupulously dread the imposition of additional labor upon each function. Albumen is best supplied to the system in the form of milk. When, for any reason, milk is, or becomes, repugnant, we must choose those foods which are at the same time nutritious and easily digested.

Judicious alimentation at an early stage of the process may prevent the formation of biliary, renal, or vesical calculi. When these concretions have formed, their removal is beyond the power of any dietary scheme, unless we believe that olive-oil is able to cause extrusion of gall-stones. These foreign bodies occasion, however, much digestive disturbance, and compel adherence to a simple diet.

Scurvy is cured by the consumption of fresh vegetables and fruit. Rachitis requires a liberal allowance of mineral combinations, which are present most abundantly in vegetable food. Scrofula and tuberculosis are benefited by as generous a supply of fats as the system can assimilate. In acute infectious diseases the loss of appetite and vitiation of secretions forbid all but the simplest alimentation, that by means of milk being most widely applicable.

Food, to be well digested and assimilated, should be selected from those articles which may be suitable to each person. The quality of the food so selected must be good, well prepared or cooked, for often much depends upon its proper preparation. Too much seasoning of food, likewise, frequently lessens both digestion and assimilation. Further, in weak and impaired action of the digestive organs, sugar, honey, syrup, starch, or starchy substances and fat, should be avoided as possible, both in the preparation of food and in the dressings that may be used.

Fish, fowl, pork, veal, chocolate, strong coffee, tea, and too much water, wine, liquors,

and a large quantity of any drinks are usually interdicted.

Care should also be exercised, in partaking of food, to eat at regular intervals, eat slowly, masticate the food well, and, above all, not to take too much during the meal. A small quantity of food often builds up the body quicker and better than overdistending the stomach with a large amount, which often leads to poor digestion, bad assimilation, and many diseases.

Cactus Grandiflorus in Functional Affections of the Heart.—J. Fletcher Horne, M. D., St. And., in *London Lancet*, Dec. 5th, 1891, says: For the last twelve months I have been using this remedy with great satisfaction. I was led to its use by reading an article in the Therapeutic Gazette of September, 1890, by Dr. Engstad. The preparation I have employed is the fluid extract of cactus grandiflorus prepared by Parke, Davis & Co. I have usually given it in doses of from ten to twenty minims. Like many other useful remedies, the virtues of night-blooming cereus seem to have been long known to homœopaths and eclectics, but the remedy has not been much used in this country by regular practitioners. My observations have led me to consider that it does not in any way supersede digitalis, or its more powerful ally strophanthus, in the treatment of organic valvular disease, but rather that its use will be found in those nervous or functional disorders where the exhibition of these drugs is not so satisfactory—as palpitation, irregularity, fluttering, intermission, slow or rapid action, arising from debility, worry, dyspepsia, or the excessive use of tea and tobacco—comprehensively classed as cardiac erethism; also where pain, distress, and weight are referred to the præcordium, in a case of angina or pseudo-angina pectoris, it afforded great relief. Its action would appear to be on the cardiac centre of the medulla, and thus through the vagus and sympathetic to the heart, exerting its influence as a cardiac stimulant-tonic to the terminations of the vagus in the heart, and its sedative action lowering arterial tension without the dangerous depressing and paralyzing effects of opium or chloral, or even belladonna. That it invigorates the cardiac plexus, and improves the nutrition of the heart, is shown by the increased tone of the pulse. My experience of the drug certainly warrants a more extended trial by other observers of what I hope is a useful addition to our armamentarium.

P. W. Williams, in the Practitioner for November, also reports his experience with this heart tonic.

It is especially in functional disorders of the heart that cactus is most useful. In the distressing palpitation from reflex irritation in dyspepsia it scarcely ever fails to give immediate relief.

Palpitation in anæmia is less distinctly benefited by the administration of cactus alone; some cases are relieved to a certain extent.

In several cases of Graves' disease we have succeeded in greatly relieving the palpitation and nervousness. We may find it of the greatest service just where digitalis and strophanthus and other similar cardiac tonics fail. The palpitation of hearts hypertrophied from prolonged and excessive muscular exercise, which are beginning to fail, are excellent cases for cactus. The drug is also indicated in such hearts when the hypertrophy just ceases to be compensatory, and more especially in aortic regurgitation. In uncomplicated aortic regurgitation we should generally avoid digitalis because it prolongs the diastolic period, and thus tends to increase the dilatation of the left ventricle and further to embarrass the heart by raising an already increased arterial tension. While cactus strengthens the ventricular systole, it tends to shorten the diastole, and thus it succors the heart in two ways, without having anything like such a marked action on the vaso-motor centres as digitalis.

Cactus is not of so much use in mitral regurgitation and in dilated thin-walled hearts. Here digitalis and its congeners reign supreme. A certain amount of improvement follows the administration of cactus in many cases, the pulse improving in force and rhythm, the urine increasing when it has been very deficient, and dropsy may be made to disappear; but compared with digitalis, or even strophanthus, it is decidedly less efficacious. It sometimes happens, however, that digitalis fails in the very cases where it might reasonably be expected to be of greatest service, and then cactus may be given a trial.

Digitalis stimulates the vagus nerve endings and the cardiac muscle, thus prolonging the diastole. Cactus acts chiefly on the accelerator nerves of the heart and sympathetic ganglia, shortening the diastole and stimulating the spinal vaso-motor nerve centres. Aconite is a powerful and direct cardiac depressant. It rapidly paralyzes the heart muscle and depresses the spinal motor centres. Unlike the two others, it lowers arterial tension by depressing the vaso-motor centres.

THE MEDICAL TREATMENT OF CYSTITIS.—In a paper read before the Philadelphia County Medical Society recently, Dr. James Tyson gives a plain and practical account of the best way to treat acute and chronic cystitis by medical means. In his article Dr. Tyson disposes very summarily of some therapeutical measures which are commonly thought to be useful, clearing the ground for what he believes is rational treatment.

As to acute cystitis he says: "Acute cystitis is far less commonly met by the physician than the chronic form, while its treatment is far simpler, and, I may add, more satisfactory, at least so far as the removal of the acute symptoms is concerned. Rest in bed is a primary and essential condition. Leeches to the perineum should be applied more frequently than they are. A poultice to this same region and over the abdominal region is always useful, while a brisk saline cathartic should never be omitted.

"As the feverish state which always accompanies cystitis is more or less constantly associated with a scanty urine, concentrated and irritating to the inflamed mucous membrane, it is desirable at once to increase the secretion, and thus dilute it. Copious libations of pure water, to which the citrate or acetate of potassium is added, in fifteen to twenty-grain doses for an adult, should be allowed. The ordinary spirits of nitric ether in two-drachm doses every two hours is an admirable adjuvant, and may be combined with the officinal liquor potassii citratis, which contains about twenty grains of citrate of potassium to the half ounce. Formerly the mucilage of flax-seed, or flax-seed tea, was much used as a diluent menstruum for the diuretic alkalies indicated, but I am doubtful whether it is any more efficient than a like quantity of water.

"Where there is much pain and straining, as is often the case, especially where cantharides is the cause of the inflammation, opium is indispensable, always in the shape of a suppository, half a grain to a grain of the extract being thus administered, or a proportionate amount of morphine. Iced water injections into the rectum, or pieces of ice similarly applied, are very efficient in allaying the pain and irritation where additional measures are needed."

In chronic cystitis there are three indications to be met: First, to lessen the irritating qualities of the urine; second, to medicate the inflamed surface; third, to get rid of the pent-up inflammatory products. To meet the first indication, one or two quarts of pure water should be drunk daily. It is, as Dr. Tyson says, a mistake theoretically to give alkaline waters or alkalies, yet practically, in our opinion, one sometimes finds good results from them. The best drug, as a rule, however, is benzoic acid, given in doses of thirty grains a day. To meet the second indication and medicate the surface of the bladder, one may use both drugs and injections. Dr. Tyson discards entirely all the commonly used preparations, such as buchu, pareira brava, triticum repens, etc. He relies entirely on the balsams, and in particular on sandal-wood oil, of which about eighty minims a day should be given. Boric acid, resorcin, and naphthalin may also be tried. Internally injections of tepid water twice a day should be used, about four ounces being injected at a time. After a while salicylate of soda, in the proportion of a drachm to the pint, may be employed. If there is much pus alum is to be added, and if there is a foul odor very weak solutions (1 to 25,000) of bichloride of mercury.

"Anodynes," Dr. Tyson adds, "are indispensable in many cases of cystitis to relieve the patient of extreme pain and the frequent desire to pass water, which are the result of the same cause. Opium and its alkaloids are the most efficient, and they are best introduced by the rectum. There appears to be no absorbing power for opium at least, and there is no use in attempting to use any anodynes by that channel."

Cocaine, from which so much might reasonably be expected, has failed of its purpose in Dr. Tyson's hands. He has injected as much as two ounces of a two-per-cent. solution into the bladder without effect, except to produce some of the symptoms of cocaine poisoning. Most disappointing, too, has been the use of cocaine to remove the exquisite tenderness of the urethra which sometimes attends this condition, and is a serious drawback to the use of the catheter.

Where there is greatly enlarged prostate, catheterization is indispensable, and is attended often with the most happy results. It is often too long deferred because of the natural repugnance to the use of the instrument.—*Medical Record.*

THE TREATMENT OF HÆMOPTYSIS.—Prof. H. Nothnagel publishes in a Vienna medical journal an interesting paper on the treatment of hæmoptysis. The first thing, he says, is absolute rest. If the loss of blood is at all serious, the patient must not utter a sound; if it is necessary he should speak, he must only whisper, or better still, write down everything he wants to communicate. He must not be allowed to see visitors, and the

sick-room must be kept at an even temperature. The patient must take nothing warm, nor anything likely to excite or irritate. The best food for the first two days is cold milk. Regular diet may then be resumed gradually, but all food which might increase the action of the heart must be avoided. Formerly an opinion prevailed that the patient should be allowed to cough, the retention of the blood being supposed to be hurtful, as it was believed that tuberculosis was a consequence of hæmoptysis, but this opinion is quite erroneous. On the contrary, one of the first indications is to suppress all inclination to cough as much as possible, for which purpose morphia is the best remedy. Should the hæmoptysis not cease, other remedies must be applied. The author first mentions those remedies which ought to be eschewed, and the use of which is occasionally a physiological error. The first to be banished is perchloride of iron, the action of which on the blood is to cause it to coagulate and to form a thrombus. In the form of inhalation it would be simply useless but for the great danger in allowing a patient suffering from hæmoptysis to draw a deeper breath than absolutely necessary for respiration. The liquor ferri, if administered internally, is, according to some, not absorbed at all, but, even if it be so, it would only tend to increase the hæmoptysis. The same may be said of tannic acid and of alum, which contract the blood-vessels only when diluted to ⅙ per cent., and are consequently useless for hæmostatic purposes as well as for inhalation. The author dispenses altogether with inhalation in hæmoptysis. The only two hæmostatic remedies he recommends as useful are ergotin and acetate of lead; the first may be used internally and in hypodermic injections, the latter may be given in conjunction with opium. Another remedy which he mentions, but of which he has himself no experience, is hydrastis canadensis. A few years ago hypodermic injections of atropine were recommended, and Prof. Nothnagel has occasionally seen them effective. No objection can be raised to half a teaspoonful of common salt when no other remedy is at hand. Hæmorrhage from the lungs is certainly sometimes arrested by its use, but the author is not quite sure if the success is *post hoc* or *propter hoc*. Nor is he certain whether, as supposed by some, a reflex irritation of the pulmonary vessels takes place. This theory is certainly physiologically feasible, as recent experiments have shown that sensory excitement in some parts causes the blood-vessels in other parts to contract. An application of ice, for instance, to the abdomen causes anæmia of the mucous membrane of the larynx. A very common remedy is the application of cold; but the ice-bag is, according to the author, of very doubtful value, as it is impossible to assume that the cold acts directly on the bleeding surface, for we do not know to what depth it penetrates. If the cold does not act hæmostatically, the effect must be due to irritation of the skin. Prof. Nothnagel warns us, however, that in some people the application of cold to the thorax causes cough, which is far more dangerous than the doubtful contraction of the blood-vessels can be useful. An extreme and heroic remedy is venesection. It is a well-known fact that wounded soldiers faint from loss of blood, when the hæmorrhage immediately stops, and a similar observation has been made in metrorrhagia and hæmoptysis. —*Lancet.*

Cornutin as an Efficient Remedy in Hæmorrhage from the Urinary and Sexual Apparatus.—Dr. Meisels, of Buda-Pesth, has studied the action of cornutin. According to Kobert, the three principal constituents of ergot are ergotinic acid, sphacelinic acid, and cornutin. The first of these produces dilatation of vessels, whereas the last two cause contraction of vessels and unstriped muscular tissue in general. The contraction due to sphacelinic acid is so extreme that gangrene is excited. It is, therefore, desirable to remove this dangerous constituent from ergot, or to isolate the less dangerous cornutin.

Pure cornutin is a brownish-gray, amorphous powder, almost insoluble in water. The muriate or citrate of cornutin, however, is more readily soluble. Experiments with cornutin demonstrated that it caused vascular contraction, whether given by the mouth or introduced directly into the circulation; the effect, in the former case, being longer delayed.

Following his experiments upon animals, the author made use of this substance in appropriate cases in human subjects—that is to say, in hæmorrhages from the genito-urinary organs—and obtained a rapid cessation of the bleeding. He usually administered the drug in daily doses of 1 centigramme (about ⅙ grain), divided into four portions. If necessary, its exhibition was continued for several days. He saw prompt action in two cases of gonorrhœa with hæmorrhage from the bladder or urethra, in one case of bleeding from cystitis in a puerperal woman, and in one case of hæmorrhage during the lying-in period from atony of the womb with sub-involution. The administration of cornutin

not only checked the hæmorrhage, but also promoted involution. The last case was that of a woman who, after her confinement, suffered for three months from bleeding, which was repeated every third or fourth day. After 3 centigrammes of cornutin had been given, in three days, the discharge of blood was suppressed, but recurred on the fifth day. During the next five days 1 centigramme was given daily; the bleeding then ceased entirely, and did not return.

Upon the ground of this experience, to which he has lately added three new cases of hæmorrhage from the womb cured by means of cornutin, the writer asks that the remedy be given a trial.—*Deutsche Med. Zeitung*, November 16th, 1891.

THE TREATMENT OF VARICOSE ULCERS.—The first indication is absolute rest, and the limb should be placed in a horizontal position. Before applying any dressing, all the surrounding parts should be cleansed and disinfected. After this, the ulcer itself must be treated. Various ointments, powders, etc., can be used, according to the condition of the ulcer. If the latter is large and flat and more or less infected, a carbolized powder is indicated. If it is atonic and small, it may be cauterized with nitrate of silver; if larger, with the thermo-cautery. Sulphate of copper and permanganate of potash form also excellent antiseptic applications.

M. Reclus recommends lotions of very hot water. He says that the limb should be dipped two or three times daily in a bath for at least ten minutes, the temperature of the water being gradually raised to 50° or 55° C., according to the toleration of the patient. When baths cannot be used, compresses dipped in hot water should be applied over the ulcer.

When epidermis has begun to form, pressure is indicated by means of strips of diachylon or some other plaster; applications of iodoform, subcarbonate of iron, or aristol will be found very useful. Later, a more steady pressure is indicated, such as by a rubber bandage which can be left off for the night and replaced during that time by a simple dressing. If the loss of substance is too large, skin grafting may be resorted to, according to Thiersch's method. The whole surface of the ulcer is scraped and then covered for eight or ten minutes with compresses dipped in salt water. The grafts, 2 centimetres wide and 10 cm. long, are spread and retained over the ulcer by absorbent cotton dipped in the salt solution, and by rubber protective. Finally, if the means previously described should not succeed, multiple ligation of the internal saphenous vein may be tried; it is a simple and quite harmless operation. After healing, an elastic stocking should be worn, as the slightest traumatism may lead to the formation of a new ulcer.—*Concours Médical.*

NEW MEDICATED SOAPS.—In a paper with this title, Dr. Eichhoff, of Elberfeld, writes:

A 5-per-cent. super-fatted menthol soap is very efficacious in the various forms of pruritus. It is used in the following manner: The patient night and morning washes the whole body, or, in case of local pruritus, the affected portion, in a luke-warm bath with the soap. In obstinate cases the lather of the menthol soap is allowed to dry, and only removed in the next bath, after a lapse of twelve hours.

In pruritus genitalis and analis washing with menthol soap is advisable thrice daily, leaving the lather to dry upon the body.

In a number of rebellious skin diseases a 5-per-cent. super-fatted salol soap has an excellent effect. The salol is contained unaltered in the super-fatted and slightly acid soap. By washing and bringing the lather in contact with the affected surfaces, which are generally of an alkaline reaction, the salol is decomposed into salicylic and carbolic acids, which act with special energy in the nascent state.

The author has used the salol soap with good results in parasitic eczema and psoriasis vulgaris. It is also beneficial in pityriasis versi-color, herpes tonsurans, favus, impetigo contagiosa, and eczema marginatum.

Super-fatted aristol soap has a particularly favorable action upon superficial dermatoses, psoriasis, parasitic eczema, and other mycoses. Moreover, aristol is a sovereign agent in promoting cicatrization, far superior to iodoform. It is, therefore, peculiarly adapted to the treatment of leg-ulcers, ulcerated lupus, and the ulcerated gummata of tertiary syphilis. With this preparation, also, several daily applications are recommended, leaving the lather to dry upon the surface.—*Deutsche Med. Zeitung.*

NITRITE OF AMYL IN CHLOROFORM ANÆSTHESIA.—Two recent deaths from chloroform administered for anæsthetic purposes direct attention anew to the various methods of resuscitation when dangerous symptoms appear. Of these methods none seems more promising than that in which nitrite of amyl

is used. Dr. F. A. Burrall, of New York, believes that there is an essential antagonism between this drug and chloroform, and in a letter to the Medical Record refers to ten instances in which life was doubtless saved by the amyl. He sums up his views in these words: "In deciding upon remedial measures we must depend on both the observations of scientists and the teachings of clinical experience. With such light thrown upon the action of chloroform, let us suppose that a patient who is inhaling chloroform suddenly develops dangerous symptoms. Of such symptoms a tendency to fatal syncope is the most frequent. What conditions are present under such circumstances, and what shall be done to avert a fatal issue? We may hold that the cerebral vessels are contracted, and the central nervous system is losing the blood supply on which its activity depends. Circulation and respiration are faltering, and death may occur suddenly at any moment. It is not a time for the application of any one method or remedy, but all the usual aids, as well as the reserves, of science should be immediately employed. The first indications are to revive circulation and respiration, since what arouses one seems to awaken the other. I think that, as nearly simultaneously as possible, the head should be lowered, the neck extended, nitrite of amyl given hypodermically or by inhalation, and artificial respiration practiced by the Sylvester method, since this method is the most convenient. It should not be forgotten that pressure on the abdominal aorta increases the blood-pressure in the carotid. If asphyxia be present, it would seem that the neck should be extended and the head raised higher than the feet."

GELSEMIUM AS A REMEDY FOR COLD.—Dr. John Aulde writes in the New York Medical Record:

For the benefit of those members of the profession who are on the outlook for improvements upon the methods of by-gone days, I venture to offer a single remedy for the treatment of a "bad cold," that is far superior to all the baker's dozen just enumerated. Gelsemium is not only useful in those cases which would recover without medication, but is also efficient when formidable symptoms are present, and judiciously employed may be the means of averting an attack of pneumonia, pleuro-pneumonia, pleurisy, or other serious disease beginning in the form of a bad cold.

Gelsemium arrests profuse nasal secretions, quiets headache and neuralgia, subdues cough and pain, favors a re-establishment of the secretions, through its influence upon the skin, kidneys, and gastro-intestinal tract. It reduces temperature and pulse-rate, promotes sleep, and creates a feeling of comfort and well-being without in any way approaching narcosis or destroying the oxygen-carrying capacity of the blood-corpuscles. By the use of this single remedy, much discomfort to the patient is avoided, digestion remains undisturbed, nauseating draughts are banished, the necessity for purgatives precluded, and all dangers of subsequent relapse practically eliminated; while recovery is prompt, perfect, and satisfactory in every particular. Ten drops of a reliable fluid extract (assayed) are dissolved in three ounces of water, and of this mixture the patient takes a teaspoonful every ten or fifteen minutes for an hour, then at less frequent intervals according to the effects produced. The plan is simple, the medicine harmless in the dosage recommended, and not at all unpalatable, and the claims for it can be verified almost any day of the week at this season of the year, by submitting the remedy to the crucial test of clinical experience.

SOMETHING IN FAVOR OF COCAINE.—About a year ago my friend, Dr. Mitchell, a representative of Parke, Davis & Co., of Detroit, informed me that his people had succeeded in discovering and removing from cocaine an alkaloid which was the cause of the unpleasant results that sometimes developed from its use. A sample given me was divided with a *confrère* who does a large amount of extracting. After continuous use for more than a year, neither of us has had anything to occur in the least annoying or alarming. We use the 10-per-cent. solution with two or three drops of alcohol added to the drachm to prevent cryptogramic formations.

This may appear heroic in strength to some, but I never have been able to get perfectly satisfactory results with a weaker solution. The needle may be inserted almost painlessly if, after entering the point, a portion of a drop of the solution is expelled and the operation suspended for half a minute to allow absoption of cocaine.

I have no interest in the matter except the good of the profession, and would like to hear from those who try it.

This cocaine is called *large* crystal, to distinguish it from the ordinary article.—J. A. Sampsell, in *Items of Interest.*

The Medical Age.

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Original Articles.

APPENDICITIS FROM THE STANDPOINT OF THE GENERAL PRACTITIONER.*

BY R. M. STONE, A.M., M.D.

There is no subject before the general surgeons of the present day that is receiving so much and so needed attention as this one of appendicitis; there is no subject of equal importance before the vast body of general practitioners of all grades that is receiving so little attention. While many general practitioners have joined with the surgeons in the recent investigations into this most important subject, while many men that never use the knife, but are perfectly competent to say when it should be used, are thoroughly familiar with the history, danger, and necessities of appendicitis, yet it is lamentably true that the grave receives hundreds of cases yearly in which this condition existed, but was never known, and in which peritonitis, local or general, was the diagnosis and the given cause of death.

My article is not intended to be on the subject of appendicitis—that I shall leave to abler men. I intend to relate the history of two cases, to bring out as clearly as possible the mistake of a general practitioner in connection with one of them, and to use that mistake as a text for a few remarks on the subject of appendicitis.

I was recently called to see Mrs. S., age 27, on a Tuesday morning at six o'clock. She informed me that she had had a severe attack of inflammation of the bowels six years before, and that on Sunday previous she had had abdominal pain, which was more pronounced on Monday, very severe upon taking a buggy ride Monday evening, and frightful all night, not allowing sleep. I found her in this condition forty-eight hours after the first abdominal pain; the pain was somewhat general, the abdominal walls rigid, and the pain most severe at the site of the appendix. No tumor could be felt; her temperature was 101¾, and her pulse 96. I gave morphine under the skin, and followed it by the mouth and the constant use of a hot-water bag. At 6 P.M. a tumor was felt at the McBurney point. I asked for surgical consultation, and called in my friend, Dr. Summers, Jr., who also felt the tumor, and agreed with me upon the diagnosis of appendicitis. Her temperature was then 102, her pulse 96; the general conditions were quite favorable, the pulse good, and there was no vomiting. While we agreed that there was no demand for an immediate operation, we thought best to lay the prospect of an operation before the husband and the patient, which we did in full, impressing them with the gravity of such cases and the possible necessity of an operation during the case, and secured their consent to have it done when demanded. At midnight her temperature was 100¾, her pulse 84; the next day at 8 A.M. the temperature was 101, the pulse 84. The general conditions were very favorable, the abdomen less rigid, the tumor still present; at 6 P.M. the temperature was 102, the pulse 92, and the general condition still favorable. The next day the temperature was 99¾, the pulse 72, and everything improved; the tumor was less easily mapped out, the abdominal walls less rigid, and she had rested well all night. The next day and for the following three days of attendance the temperature was 99 and the pulse 76 to 96. On the sixth day of her trouble there was no abdominal pain, and the tumor could not be felt. As usual with her, after the use of morphine, she now for the first time began to vomit, which was easily controlled by champagne, which she pronounced most elegant and delightful treatment.

This case ended here with fairly rapid convalescence, embarrassed only by some irritability of the rectum with mucous diar-

* Read before the Medical Society of the Missouri Valley at Lincoln, Neb.

thora some twenty-eight days afterwards. The treatment consisted entirely of morphine hypodermatically a few times and by the mouth steadily, one-fourth of a grain every three hours for four or five days; it was not, in our judgment, advisable to use cathartics at all. We did wash out the lower bowels on the second or third day's attendance.

I now turn from this most fortunate and yet plainly characteristic case to one more violent and ending in death.

I was called on Wednesday, October 9th, at noon, to see Miss X., aged 16. I was unable to reach her until 6 p. m., when I found a very robust country girl, who gave me the following history: She had had constipation for months, and at times abdominal tenderness; went to school on Monday suffering with a little abdominal pain; had still more pain on Tuesday, and yet walked to and from school, nearly 1¾ miles each way; on Wednesday had had a high fever and much more pain. I found her suffering very severe pain, with a temperature of 103° and a pulse of 120; the abdominal walls were very rigid, but no tumor could be felt at the McBurney point. Thursday morning the temperature was 102°, the pulse 132; the pain was still more severe and a tumor was readily felt. I telegraphed to her parents, and laid the necessity of an operation in the near future before her friends with whom she was living, who agreed to the operation if it became necessary. I called Dr. Summers, Jr., in consultation, and we saw her at noon, when the abdominal walls were very rigid, and the tumor very plainly felt; the temperature was 104°, the pulse 148, and we felt that leakage had taken place. We found that the parents could not reach Omaha till 4:30, so we again laid the matter before her friends, and in the strongest language urged an immediate operation. They declined their consent on account of the fact that the parents would reach Omaha in four hours. We insisted that an operation was imperative, that every hour lost was most valuable time lost, that the condition was entirely parallel to one in which a patient was found bleeding from an internal artery and death imminent, that they had no right to compel delay, and that they added very materially to the girl's danger. They were obdurate, and I laid the matter before the girl. After hearing me, she replied: "I will take the responsibility if my friends decline, and you may operate at once if you deem it best." I so informed the friends, who replied that the girl was only 16 and was not old enough to take such a responsibility, and they again refused to allow us to operate. Had the girl been 18, we should have operated without regard to her friends. At 3 p.m., Mr. S., in whose house she was, accidentally met the girl's father's family physician on the street, informed him of our views, and requested him to go up alone and see the case. This he improperly consented to do; he went to the house, examined the girl as thoroughly as he knew how, and informed the friends that she was doing well, did not need an operation, and would recover upon general treatment. At 4:30 I accidentally met the doctor while I was on the way to the house with the parents; he gave me his views, and wished to argue the case with me, as he was going to the train. I informed him that if he was not going back to the house I did not care a continental what his views were, that if those were his views he had already done harm enough. I laid the matter before the parents on the way to the house and then sat in the parlor while they went to the room and saw their daughter. The father soon came back and said: "Operate at once, if you deem best." I called Dr. Summers by telephone and made things ready. Meanwhile Mr. S. returned and said that Dr. B., the family physician, had so impressed his views upon him he should urge the parents to forbid the operation, and that he had called Dr. Crummer in to have his views. I told him that nothing could please me more than to meet Dr. Crummer in consultation, because I knew that he was thoroughly familiar with such cases and would at once approve of the operation. Drs. Crummer and Christie examined the patient and said that most likely an operation was already too late, that leakage had already begun, and the general condition could hardly be worse; that death was inevitable without an operation and highly probable with one, and was the only measure left. Dr. Summers, assisted by those named and myself, then operated; he made an incision in the ileo-

cæcal region, and upon opening the peritoneum there popped out onto the abdominal wall an enterolith, cigar-shaped, one inch long, and ¾ of an inch in diameter, a most rare occurrence. The appendix was brought into view, and a perforation found where the enterolith had ulcerated its way out; further investigation showed that the pelvic cavity was full of pus. Dr. Summers then made a central incision, and washed out the cavity till the water returned clear; there was a large quantity of most horribly foul pus within the pelvic cavity, and pyæmia had already taken place. The patient came near dying on the table, but was got to bed by the frequent use of hypodermatic injections of brandy. She died at 11 p. m., and thus ended one of the more rapid and sad cases I ever saw, with most peculiar attendant circumstances.

In eighteen years of medical practice I never realized so strongly the responsibility attendant upon being a physician. The conditions found upon the examination of this case by Dr. Summers and myself showed the absolute necessity of an immediate laparotomy for the appendicitis; nothing but the age of the girl prevented us from saying to the friends that in face of their refusal we should be compelled to operate without consent of friends or presence of parents, the patient assuming the responsibility. Nothing in medical practice has ever struck me so forcibly as the terrible responsibility of Dr. B., who, in violation of all propriety, visited my patient without me being present when I could easily have been found, and his assuming, in face of the expressed opinion of two physicians, that we were wrong, that no pus was present, and that an operation was not demanded. When he learned, as he did later, that all four of the physicians agreed upon the conditions and proved them by the operation, he must have realized as never before the responsibility he had assumed. Had we been fortunate enough to have found the pus walled off, and to have made a successful operation and saved our patient, then indeed would he have been overwhelmed.

Appendicitis is by no means a new condition. Up to within eight years we were burying many of our cases of appendicitis, and signing the death certificate with "death from peritonitis," never knowing or dreaming of the real condition. Our good friends, the surgeons who operate in the great hospitals, who do not have the views of officious friends to combat, who examine, pass judgment, and operate when they see fit, first taught us the real nature of this trouble; they were soon able to diagnosticate it and to lay down some rules for our guidance. Surgeons, however, are not yet entirely agreed as to the indications for appendectomy; this operation, in common with all the later operations, has called forth most widely divergent views. Dr. Morton, of Philadelphia, read an able paper on appendicitis at the last meeting of the American Medical Association, dividing the cases into three groups: "First, where irritation or simple inflammation only is present; in these the diagnosis is not easy; the symptoms are pain, increased by pressure, possibly nausea, vomiting, constipation, and an accelerated pulse. Second, where severer inflammation, with ulceration and perforation, give tumefaction and other evidences of inflammation; in these there was a tumor from lymph exudation, but with no symptoms of pus-formation. Third, where ulceration and perforation had occurred with sufficient lymph exudation for protection; in these the onset was sudden, but it was not usually the first attack; in these cases there was no encasing wall, and there was intense local and general peritonitis." In the discussion of this paper by such men as Fenger, Marcy, Manly, Tiffany, McGray, and Thomas, all views were held, from that of operation in every case to operation in one out of twenty. Dr. McGray stated that as Demonstrator of Anatomy he had found diseased appendices in 35 per cent. of autopsies from death from all causes. Dr. Thomas said that without operation death was the exception, recovery the rule.

In the London Clinical Society recently, during a discussion upon appendicitis, Mr. Bland Sutton called forth a large smile by saying that one of his cases of appendicitis "had been treated by the methods ordinarily adopted by physicians," and the great surgeon, Treves, noted for his boldness, stated that "the medical treatment of this affection was successful in the great majority of cases, and that to treat them all surgically would

only lead to disaster; that the epidemic of removal of the appendix had been extreme, and that mere acuteness of symptoms would not always indicate even a diseased appendix, while he had known patients to keep at work up to the bursting of the appendix. He deprecated surgical interference before the fourth or fifth day."

Dr. Study, of Indiana, reports a case of death preceded by intense abdominal pain of only 42 hours' duration, where the autopsy showed a large quantity of pus in the pelvic cavity, the intestines matted together, and two perforations in the appendix.

My plea is not for operative interference, but for the utmost care and anxiety in the watching of these cases of inflammation in the ileo-cæcal region, the early calling in of the experienced surgeon in consultation, the division of the responsibility of deciding what the real condition is, the laying the gravity of the condition before the patient and the friends early, and thus paving the way for a quick decision when it becomes necessary, and the operation of removal of the appendix in cases that demand it.

Omaha.

OPERATION FOR LACERATED CERVIX.*

BY WM. GOODELL, M.D.

To-day I bring before you a woman whose history is as follows: Since her last labor, three years ago, she has never been well, the cervix of the uterus having been lacerated during labor. At first she had a great deal of menorrhagia, which gradually grew better under local and general treatment. But she has a bearing-down feeling, her monthlies are still somewhat profuse, and she has pains in her back and in her groins, the latter running down the inside of the thighs. This pain running down the inside of the thighs is generally of ovarian origin, and comes from the genito-crural nerve. It may, however, be merely neuralgic, and is not pathognomonic of organic disease.

Now, let me say a word or two about lacerations of the cervix. As a rule, I believe, they come from too great haste on the part of the physician in delivery. He is in a hurry, and knows that by putting on the forceps or rupturing the membranes early he can accelerate labor. Rupture of the membranes will almost always hasten labor by changing the dilating pains to bearing-down ones, so that the head is prematurely forced on the undilated os. Often these lacerations heal of themselves; therefore, in order to further this end, the physician should be careful to syringe out and keep the vagina sweet and clean. If union does not take place, eversion of the lips of the womb occurs, exposing to injury the delicate lining membrane of the cervical canal. This becomes swollen and angry, and secretes a tenacious mucus. Its behavior is like that of ectropion of the eyelids, in which the exposed conjunctivæ are red, swollen, and weeping. As the direct result of this cervical irritation, too much blood is invited to the womb, and this over-nutrition produces fungous vegetations of the endometrium. Hence the radical operation for an old cervical tear should always be preceded by a thorough curetting of the endometrium.

We have put the patient in the Sims position, viz., on her left side, and with the left arm behind her. Then the vagina is syringed and swabbed out with a 1-to-1000 solution of corrosive sublimate. Next, the womb is curetted and many vegetations removed. These will be passed around for your inspection. Catching hold of each lip of the cervix by a tenaculum, I bring them together, and pass a needle threaded with a strong thread directly through the point where my future os uteri is to be. That gives me complete control of the parts. Many excellent gynæcologists use the scissors in paring the raw surfaces, but a knife cuts cleaner and more accurately, so I prefer it. Leaving on each lip a ribbon of undenuded mucous membrane, to form the new cervical canal, I cut away all the cicatricial tissue on each side in the form of a wedge.

In this operation you will find it advantageous to educate both hands for the work. I am right-handed, but by practice I have taught my left hand to do much obstetric and gynæcological work—some of it, indeed, better than with my right hand. For instance, I can perform version, remove an adherent placenta, and make a gynæcological diagnosis much better with my left hand.

* Report of Clinical Lecture

Four silver sutures have been placed on each side, but they have not yet been secured. These will be left in for ten days. Had the tear been a bad one and with much ectropion, causing resistance to coaptation, I would leave the stitches in for not less than two weeks. This would give a chance for such firm union as would not yield when the parts were released from the stitches. Now that all the sutures are in, each one will be threaded with a shot which is clamped. Why do I not twist the wires, instead of using shot? One reason is that I use a very fine wire—No. 31—which will not stand twisting. Another reason is that each shot keeps its part of the wound from everting. Finally, shotted sutures are found and removed very easily, whereas twisted sutures bury themselves deeply in the tissues, and they are consequently more difficult to find and to remove. Before each shot is run down and clamped, the wound is forcibly syringed with the 1-to-1000 mercuric solution. This removes the clots and disinfects the raw surfaces. Another point, and a very important one, with reference to these sutures: Always count them after having passed them, because even shot will get buried, and you may, in removing them, overlook one or more unless you know the number. One of my medical friends carelessly overlooked and left a number of sutures in the cervix of one of his patients. She afterwards had a series of symptoms, which I really do not think were attributable to the presence of the sutures. Unfortunately, these sutures were found by another physician, who referred the lady's illness to them, and my friend came nigh paying for his carelessness with a law suit. Twice have I overlooked a buried suture and left it in. Once it so interfered with the marital relations that the lady again consulted me, and, upon an examination, I discovered and removed it. The other one I unexpectedly found some months after the operation, and removed it without the knowledge of the patient. These occurences led me to the practice of counting the stitches and writing down the number in my pocket diary. The first sutures on each side I have left long and put a shot at the extremity of the wires, so that they may not prick. These sutures being long, you can, with their aid, and without any assistant, after bringing the woman to the side of the bed, with the nates over the edge, draw the womb down and remove the sutures—the short ones first and, last of all, the two long ones. Otherwise, you may have to use a Sims speculum, and have a least one assistant to aid you.

As to dressing, I have very little faith in iodoform, although I now use the powder, dusted over the cervix. You may ask why, instead, I do not use iodoform in the form of suppositories. We have in these suppositories cocoa butter and a little wax. Now, these will melt from the heat of the body, and possibly the wax or cocoa butter might insinuate itself between the raw surfaces of the wound and prevent union by first intention.

I told you that these tears are often due to the forceps, so let me say something more on the subject. The temptation to the busy practitioner to use the forceps is great, and consequently the forceps, I believe, have done, in the aggregate, more harm than good. They are too often applied when uncalled-for, and by those who do not know how to handle them, so that we have often a torn perineum and cervix. Yesterday a physician was in my office. I said to him: "I suppose you have some pretty rough cases of labor; what forceps do you use?" He told me he used Wallace's. These are very powerful forceps, and I have but one objection—most men who put them on do not seem to try to put them on the side of the child's head, and, as a consequence of their being put on any other part of the head, they are liable to cut in. This physician told me that there is in his town a man who was horribly disfigured by forceps; the bone was crushed, and the tissues around the eye sloughed so that there has been cicatricial contraction and ectropion of the lower lid; he had also facial paralysis on that side. I have never yet seen such serious consequences as that, but I have seen children cut by them, and, I think, killed by them. One cannot always get the blades of the forceps on the sides of the head, and, if you are not in the habit of applying them that way, I advise you to get Simpson's forceps, because they are made to adapt themselves to any curve of the head. I always

try to put the forceps on the sides of the child's head; I therefore prefer Davis's forceps. Sometimes, in unrotated heads high up, it is impossible to get the forceps on the sides of the head; then one blade is sure to rest over the child's brow, usually the right one, and wounds may be the result.

Are we justified in sewing up a lacerated cervix immediately after labor? I say, No! unless the wound is bleeding freely from the tear; but I have never yet seen bleeding from this source sufficiently grave to demand operative interference. I should dislike to sew up the neck of a womb that has just been stretched and bruised by labor; nor can it often be necessary, for the parts contract so soon after labor that the hæmorrhage ceases in a short time, or it can be checked by application of ice or by douches of hot water. Yet there are excellent physicians who advocate the immediate operation.

Another thing about these tears. When they are angry and everted, unless they are operated on, the woman is in danger of having her cervix attacked by epithelial cancer. This usually happens about the time of change of life, so that it is very wise, especially if there is a history of cancer in the family, to operate, if for no other reason than that. I have never had cancer occur in any of the cases on which I have operated for laceration of the cervix, and they now number over four hundred. The ordinary small tears, that show no eversion, but are simply small slits in the cervix, do very little harm, and there is not that necessity or that urgency for closing them.

My attention was first called to these tears by an article written on the subject by Dr. T. A. Emmett, of New York. Previously we had looked upon them as ulcers, and even yet some physicians are so "*sot*" in their old notions that when a woman comes to you and says her physician tells her she has an ulceration of the womb, do not take that for granted, for, in the immense majority of cases, it is not an ulcer, but a tear with eversion, which looks like an ulceration. You will find the cervix with a roughened, granular surface, exactly like that of granular conjunctivitis. It is a tear, kept angry by exposure and attrition. At first, I was tempted to operate too frequently, for when I saw a woman with anything that could be called a tear, I would attribute all the woman's backaches and headaches to it, and was led to promise health as a result of the operation. But by experience I soon knew better. These ordinary tears, in which there is no eversion, give very little trouble, and should only be operated on to prevent the occurrence of cancer, when there is a history of that disease in the patient's family. When there is eversion, however, and the tear is angry-looking, with enlargement of the glands and thickened lips, then we have phenomena which can be cured only by an operation. I no longer promise the patient that the operation will absolutely relieve her backaches or headaches, or that she will sleep any better. I tell her that these are nerve symptoms, and may come from the nerves only, and not secondarily from the tear. But I do meet with cases in which the operation makes a new woman of my patient—one, especially, who had got into a hysterical condition bordering on insanity. There was insanity in the family, three members having become inmates of a lunatic asylum, and this made me anxious. The patient became melancholy, morose, and cried on the slightest provocation. I operated on the laceration of the cervix, and there was a complete transformation. Her mental and physical troubles disappeared, and she became perfectly well. That was the most successful case I ever had.

Hence, perform the operation if it is called for, but do not promise too much with regard to its effects.

University of Pennsylvania Hospital.

PUERPERAL PSOITIS.*

BY HAL C. WYMAN, M.S., M.D.

I have met with several cases of abscesses incident to the puerperium which possess features rendering them suitable for classification by themselves, and add one more to the list of pathological sequelæ to parturition. I can best describe the phenomena associated with these peculiar abscesses by describing some of the cases as they occurred in my practice.

*Read before the Detroit Surgical and Pathological Society.

Mrs. A., aged 22 years, consulted me three years ago. Her husband came to my office and solicited my advice in behalf of his wife, who, he said, "was confined a year ago and got along very well for a few days after a severe and protracted labor, but complained more or less constantly of pain in her side. She could not straighten out her right limb, because of pain, and she would suffer in the region of the right sciatic nerve whenever the attempt was made. She began to have fever, and suffered more or less constantly from it for several weeks, when an abscess appeared and broke near the posterior superior spine of the ileum. Then her pain gradually disappeared, but the abscess continued to discharge large quantities of pus for several weeks before it healed. The thigh remains flexed at right angles to the pelvis. She is obliged to walk with a crutch. I want to know if anything can be done to strengthen her and straighten her limb." Such in substance were his remarks to me.

When I saw Mrs. A. I found all the above statements confirmed. Over the posterior iliac spine was the pearl-white, glistening cicatrix, which marked the sinus by which the abscess discharged. A vaginal examination found the uterus in normal position and freely movable in the pelvic cavity. The appendages of the uterus appeared normal during examination by conjoined manipulation. Palpation over the lower part of the abdomen revealed in the right iliac fossa an ill-defined, hard mass, which moved slightly when effort was made to straighten the limb. It blended with the deep strictures adjacent to the upper border of the crest of the ileum, and was clearly the remains of the abscess, which pointed and discharged as heretofore described. The psoas and iliacus muscles were made very tense whenever attempt was made to straighten out the limb.

I introduced a tenotome through the inner aspect of the thigh, and severed the attachment of the muscles to the lower trochanter of the femur, the result of which enabled me to pull the flexed limb out parallel with its fellow. The patient made an uninterrupted recovery from the operation, and has now regained full use of her limb.

Of course, I speculated as to the cause of this abscess, which had clearly involved the psoas and iliacus muscles. At first I thought that, because it was associated with the puerperal state, it must have resulted from infection traveling along the broad ligament or fallopian tube. But the soundness of those organs, as revealed by my examination, made me doubt the correctness of that hypothesis. Then it occurred to me that the case might have been Pott's disease of the spine, but the previous history was not what we would expect in a case of caries of the vertebræ. She had noticed no pain in moving about different from what a pregnant woman normally feels. She was not sick before her labor commenced, but had taken a long walk without particular inconvenience the day before. Neither theory of the origin of the mysterious abscess and puerperal fever was satisfactory, so I dropped the case from my mind with the idea that it was primarily a simple case of what some writers call psoitis, caused by a strain of the psoas muscles.

In a few months I saw another lady, whose case bears a striking resemblance to the one just described. She had been delivered of her second child ten days, when she began to suffer from pain in her left thigh and leg. The pain was a dull, steady ache, which moved from one part of the limb and hip to another, but kept up steadily, day and night alike. Her thigh was semi-flexed on the abdomen. Any attempt to straighten it caused pain. There were fevers and chills and sweats in the case, just as they occur in almost any case of puerperal fever, but I could find no pus in the abdomen by palpation. The uterus was subinvoluted and gave issue to a fœtid discharge. After five weeks of constant suffering and fever, an abscess pointed just above the top of the crest of the left ileum, and I opened it under chloroform, let out a large quantity of pus, and pulled the flexed thigh straight. As I pulled on the leg to straighten the thigh the pus flowed more freely, and I could plainly feel the cracking of adhesions which had developed about the psoas and iliac muscles. She recovered after four weeks of drainage and irrigation of the abscess cavity. I could never find a palpable connection between the indurated tissues in the wall of the abscess and the uterine adnexa.

The third case I saw with my colleague, Prof. Gunsolus. He attended the case for several weeks before an abscess appeared above the crest of the ileum, deep in the left iliac fossa. We opened it after a deep dissection of the iliacus muscle and forcible extension of the left thigh, which had been flexed at right angles to the pelvis since the patient's baby was a week old. She had all the febrile disturbances found in the puerperal sequelæ before we discovered the abscess.

Now, what is the real pathology in these cases? I am not acquainted with the histories of any autopsies that have been made for the purpose of studying the pathology of cases of abscess of the psoas and iliacus muscles following childbirth. All the cases of psoas abscess that are described in the literature to which I have had access are cases of Pott's disease, and they lack many of the essential features found by my cases. The history of the cases of this disease which have come under my observation may be summarized as follows:

1. A tedious labor in a woman of previous good health.

2. Pain commencing in either side of the hip or groin and running down the thigh along the course of the sciatic nerve, usually.

3. Increased rapidity of pulse, loss of appetite, dry skin, furred tongue.

4. Rise of temperature, varying from 100° to 104° F.

5. Tenderness, deep in either iliac fossa.

6. Flexion of the thigh upon the abdomen.

7. Pointing of abscess above the crest of the ileum, at base of lumbar region, in the groin, or on the inner aspect of the thigh.

The differential diagnosis of this inflammation from inflammation of the fallopian tubes, ovaries, broad ligaments, or pelvic peritoneum and connective tissue can be determined by the following signs, which do not occur in pelvic inflammation, viz.: (*a*) Flexion of the thigh, which amounts to fixation of the limb in the flexed position; (*b*) tenderness quite limited to the psoas and iliacus muscles, and increased by attempts to straighten the limb; (*c*) pain increased by attempts to straighten the limb, and shooting down the sciatic and other nerves of the thigh and leg; (*d*) unilateral character of the pain and tenderness.

It may generally be distinguished from inflammation of the tubes, ligaments, or connective tissues of the adnexa by the fact that the mobility of the structures is found by bimanual exploration to be unimpaired. The uterus, however, may be greatly enlarged, subinvoluted, in consequence of the general systemic disturbance which follows an inflammation localized in the psoas muscles.

The cause of this puerperal psoitis and abscess is found, I think, in injury done by the head and shoulder of the child *in utero* pressing upon the muscle and rectum, which favors the passage of micro-organisms from the rectum to the softened muscles.

Detroit, Mich.

RECTO-VAGINAL FISTULA.—RECTAL STRICTURE AND PROLAPSUS UTERI.

BY E. F. MONTGOMERY, M. D.

The patient I bring before you this morning is a woman thirty-one years of age, who has had three children; her mother died of heart disease at sixty-two, the father of old age. She has no brothers and sisters living, has had the ordinary diseases of childhood, and within the last two years has had three attacks of rheumatism. A few weeks ago she helped to lift a heavy woman, when she felt something coming down; her uterus is found to be prolapsed, and she is also suffering from a recto-vaginal fistula. We have, then, a woman thirty-one years of age, the mother of three children, who has had a development of acute prolapsus, and we propose to make an examination to determine the condition. As the patient is lying upon her back and is directed to bear down, you will notice that there is a turning out of the anterior and posterior walls of the vagina. As I separate the vulvar orifice you can perceive the protrusion of both these surfaces into the vulva. The perineum is of normal length, but there is some protrusion of the posterior wall of the vagina from the orifice of the vulva. Now, in this patient we have also a history of recto-vaginal fistula. Before examining into this, I wish to say to you that I very rarely hear of vaginal fistula that I do not associate it with

rectal stricture, and in making the examination in this patient I find at once indication of the constricted condition of the lower end of the rectum. It is with difficulty that my finger passes through the opening, and you see by the pain the patient experiences that the examination is distressing. As I introduce my finger I notice that the mucous membrane about the parts is nodular, and above this stricture is the opening which leads into the vagina. As I take this probe and pass it into the vaginal opening, you can readily see that it is brought out at the anus. The uterus is retroverted, slightly prolapsed, and quite tender.

In this patient we have quite a medical mine; a woman suffering from stricture of the rectum, recto-vaginal fistula, prolapse of the vagina, retroversion and downward displacement of the uterus. Recto-vaginal fistula may be dependent upon a variety of causes; thus, during the process of labor the head of the child may impinge against the wall of the rectum for such length of time as to lead to loss of its vitality, subsequent sloughing, and the formation of an opening. The perineum may be torn, and in its subsequent union leave a fistulous track into the rectum. The recto-vaginal septum may be torn during labor, or it may be the result of inflammation in the glands in the lower part of the rectum and formation of an abscess, which opens into both the vagina and the rectum. It may be the result also of inflammation following injuries to the part. But, as we have said, the most frequent cause is the presence of stricture, and the retention within the bowel above the stricture of fæcal material that becomes hard and dense, which sets up an inflammation leading to the formation of an abscess and partial destruction of the septum. The importance of the stricture as a cause of the fistula can be appreciated from what I have said to you, that no operative procedure is justifiable, with a view to closing the fistula, so long as the stricture remains.

It is an important point also to arrive at some idea as to the cause of the development of the stricture itself. In this patient we are unable to determine whether the stricture of the rectum is the result of syphilis, the beginning of malignant disease, or the result of tubercular ulceration. There are at present a number of nodules, which, together with a stenosed condition and the contraction of the rectum, lead me to think it possible that we have a beginning of malignant disease. This cannot, however, be determined until we have made a careful examination of the rectum.

Stricture of the rectum may result from the presence of syphilitic ulceration, from the recurrence of tubercular disease, and the ulceration following. In these cases the patient complains, during the development of the trouble, of more or less diarrhœa, so that she will have a number of attempts at evacuation of the bowels every day that will consist of nothing more than gas with purulent discharge. The irritation which this produces gives rise to frequent efforts at evacuation. A condition of this kind leads to an effort on the part of Nature to heal up, which leads to cicatrization and stricture. If these cases are not treated promptly the entire rectum becomes involved, and the patient suffers violent distress during evacuation.

Take a patient suffering from moderate stricture; you can readily appreciate that, if this is associated with a muscular system which is not in a perfect condition, there will be a tendency to prolapsus from the efforts at evacuating the bowel, and this might at a later date result in the complete relapse of the pelvic viscera. As we have already said, it is impossible from a cursory examination to determine whether this is syphilitic, tubercular, or malignant in its origin. In treating the case, however, we are first to determine the character. The treatment, of course, must very greatly depend upon the particular condition present. If malignant ulceration develops, the earlier we proceed to remove the diseased tissue the better will be the chance of the patient to prolong life. If it is an ulceration of tubercular character, we will endeavor to place the patient upon a plan of treatment which will arrest the further progress of the disease, both medically and locally. The local measures will be directed to keeping the parts clean. By the application of the nitrate of silver in weak solutions, the use of various astringents, the dilatation of the rectum, and the application

to the surface of iodoform gauze, the parts can be kept clean, and the healing of the ulcerated surface promoted. Indeed, in many of these cases of tubercular ulceration it is probably better to place the patient under a more active plan of treatment, such as a hot iron to the surface, so as to destroy the further development of the disease, and then by treating the patient subsequently, and keeping the rectum dilated, we will be able to heal the surfaces without stricture. If the condition is syphilitic, this is able to be determined by the history of the patient. We have a condition which is most amenable to treatment. The patient should be placed at once under constitutional treatment, together with local applications, and the cure will be more readily brought about than in either of the other varieties named.

The consideration of treatment for fistula in this region is a matter of very great importance. It presents a class of patients probably as difficult to treat as any with which we have to deal. In the first place, we have to eliminate the conditions from which they have arisen; thus, if it is due to stricture, it may be the simple result of the formation of the abscess in this region, or a fistula in ano or a fistula of the vagina—and our treatment must be directed, first, to the stricture, leaving the fistula for secondary consideration. Fistula in ano in the female is a lesion which offers difficulties in its treatment that are not met with in the male. The arrangement of the muscular fibres around the two openings is such that, if the sphincter is cut, there will be a greater loss of subsequent control, and the proper action of the sphincter will be destroyed. Even in those cases in which the parts heal normally, there is a cicatricial groove left which is not completely controlled by the action of the sphincter, and this, it appears to me, is just as true in the male as in the female.

The ordinary treatment of fistula is to incise it, scrape out the pyogenic membrane lining the sinus, and pack the opening with gauze, allowing the cavity to heal by granulation. Another plan of treatment is the introduction of a thread through the canal, tying this tightly upon the intervening tissue and permitting it to cut its way through. As this cuts, the canal above granulates or fills up, so that when the tissues are cut through, the opening is nearly entirely healed. This, like the other, is objectionable for the reason that it is of long duration. It is a filthy procedure, and results in a defective sphincter. In such a fistula as we present in this patient, either operation would lead to cutting through the entire perineum, the consequent separation of the surfaces through the action of the sphincter and the transversus perinei muscles, and a condition similar to that which would result from laceration of the perineum into the recto-vaginal septum. In such cases, then, no one would think of operating by this plan. Here, if the fistula was cut through, sutures would be introduced in such a way as to restore the perineum and the calibre of the gut. In any case of fistula in ano, in my judgment, the proper plan of procedure, after the thorough emptying of the alimentary canal, the washing of the parts, the introduction of the grooved directory through the fistula's opening, and the insertion of a suture through the mucous membrane above the fistula, would be to incise the fistula carefully, cut out or dissect out the remnants of pyogenic membrane or tissue, then carefully again wash the parts and suture them with catgut sutures in such a way that the fistulous opening is closed. In this way the patient in one week will have the opening united and be in a better condition than would be accomplished by two or three months under the old plan of treatment. These sutures must be introduced in such a way that the upper part is completely closed, and the edges of the mucous membrane closely coaptated. In those cases in which a number of fistulous openings exist, or in which the opening is situated high up, we may still operate by this method of procedure, closing the opening into the rectum and leaving an opening externally, through which drainage of the deep cavity may be accomplished, and the fistulous track thus resulting will be shut off from the rectal cavity.

As a preparation for this operation and the condition of having the bowels thoroughly evacuated, the patient should be kept for a few days on an animal broth diet, so that there will be as little waste material in the intestinal tract as possible. The sphincter

should be thoroughly dilated, paralyzing it so that in the subsequent evacuation of the bowels the newly-united surfaces will not be subjected to undue pressure. In suturing the tract, catgut sutures are preferable, for the reason that they are absorbed, and the patient is relieved of the pain of having them removed. The procedure is one that is applicable to all cases of fistula in ano, and should be, in my judgment, preferred. Another method of treating the fistula is that which is called circular drainage, the introduction through the fistula of a rubber drainage tube of sufficient size to make pressure upon all sides; in this way, by a process of ulcerative absorption, the pus-secreting surfaces are removed, and this tube may be followed by a smaller one until, finally, the tube may be withdrawn, or partially withdrawn, and the cavity closed. The plan of treatment is a slow one and not always sure. These fistulæ arise in some cases as a result of tubercular conditions. Where the fistula is associated with active and marked disease in the lungs, the wisdom of operation is questionable; in such cases it sometimes acts as a counter-irritant and decreases the activity of the development of disease in the lung.

The patient I brought before you, in addition to the rectal disease, offers also an interesting condition regarding the genital tract. We have, as we have already said, displacement of the uterus and the vagina, a development which in this case undoubtedly results from the marked tenesmus. Prolapse of the uterus and of the vagina occurs from a variety of causes. It may take place from the increase of abdominal pressure in the patient; it may take place as a result of defective muscular tone, caused by lesions which have occurred during parturition, extending down to or through the sphincter. In every case of laceration of the perineum occurring in labor we have in addition a want of support, an additional force due to the defective involution of the uterus; consequently with loss of support we have increased weight of the uterus, tending to cause it to be more readily displaced downward. As a patient stands, in the normal condition, in an upright posture, the axis of the uterus is nearly at right angles to the vagina, while the axis of the vagina is about 60° to the horizon. In the patient suffering, however, from increased weight of the organ, we find it settles lower down into the vagina, and that with this displacement downward there is also a retro-displacement of the organ, until its axis conforms more nearly to that of the vagina; with this the intra-abdominal pressure is no longer directed upon the posterior surface of the uterus, but upon the fundus anterior surface, consequently increasing downward displacement. In this patient we have had, however, no laceration of the perineum. The intra-abdominal pressure has been increased by the rectal tenesmus, associated with which there has been a loss of muscular tone, favoring the more rapid development of the displacement. The intra-abdominal pressure in many cases may be increased as the result of growth, either in the uterus or in the structures about it; thus I have seen a patient with an ovarian tumor situated in the pelvis have an acute prolapsus induced by violent exercise. A patient came under my observation only a few weeks ago, a colored woman, in whom the uterus projected nearly its full length, from the vagina, and upon examination there was found a fibroid growth in the fundus of the uterus and a large hydrosalpinx situated in Douglas's pouch posterior. The conjoined pressure of these two masses had led to the displacement of the uterus. In this patient the removal of the tumor and the rest in bed brought about a relief of the condition.

Prolapse of the uterus may be divided into three degrees: First, that which settles down upon the pelvic floor of the vagina; second, where a part of the uterus protrudes through the orifice of the vulva; third, where the entire uterus projects. The third degree is known as complete prolapse, or procidentia. As the uterus settles down, we find the patient undergoing symptoms indicating various degrees of development. Thus, in the earlier progress the patient suffers a sensation of weight or pressure in the pelvis, distress of the bladder and of the rectum. The uterus increases in size as it settles down in the vaginal tract, by which its displacement is increased. The more it is displaced, the more closely we will find the bladder dragged down until a portion of its

surface is on a lower level than that of the internal orifice of the urethra. As a result, the bladder is not entirely evacuated, and portions of the urine are retained. This, together with the mucus, undergoes decomposition, producing an ammoniacal state, in which the patient suffers from frequent micturition, and the bladder is only completely evacuated when this portion is pushed up. In marked prolapsus, when a *cul de sac* is formed in which the urine is retained, and in which deposits of sediment result in the formation at times of large calculi, where the uterus is entirely protruded, the vagina is subjected to friction against the clothing of the patient, causing thickening of the walls, and is bathed with urine, which leads not infrequently to cracking fissures and ulceration, so that the condition of the patient is an exceedingly uncomfortable one. In these cases of prolapsus we may have not infrequently also prolapse of a coil of the intestines, and, if the patient has been exposed to conditions that may lead to inflammation, we may have fixation of these in the sac, producing what is known as an irreducible prolapse of the uterus.

Philadelphia Medical Hospital.

A THEORETICAL AND PRACTICAL VIEW OF OUR AUTUMNAL FEVERS.*

BY G. P. SATTLER, M. D.

The subject to which your attention is briefly invited is not a new one. Neither is there anything remarkable in the arrangement of the subject-matter. You will not be called upon to sit in review of an elaborate or exhaustive treatise. Possibly you will not be astounded by the grandeur of its logic, nor yet captivated by the brilliancy of its diction. Rather prepare yourselves for a recital of facts as they exist in a plain, practical manner.

Malarial, typho-malarial, and typhoid fevers have prevailed, in some form or other, at various times and places, in all latitudes and in almost every habitable portion of the globe. They have been traced back to very remote ages. The morbific agents to which these fevers are attributable have probably existed cotemporaneous with man, and may be as old as Father Time, Mother Earth, or old Ocean's stormy billows. No age is exempt and no condition in life entirely free from its baneful influence. Of the pathogenesis we can say that the agents or agencies which bring about these fevers and maintain them have so far eluded the scrutiny of the most keen and careful observers. The researches and investigations which have been instituted have not yet crystallized in any definite form. The ætiology and pathology of some of these fevers not being satisfactorily demonstrated, a specific form of treatment is out of the question. It has been conceded by those best entitled to an opinion that no remedy or plan of treatment has yet been discovered which has the power of cutting the disease short. Some few cases of typhoid fever no doubt have been aborted, and we read of an abortive type of this fever. But a professional abortionist in this department of medicine has not been heard of throughout all the land.

In taking a precursory view of these fevers, of which typhoid is the type, two facts—stubborn facts—stare us in the face. One is that these fevers do prevail, often to an alarming extent, and we must of necessity meet them. The other is that we do not always feel fully armed and equipped to meet so formidable an adversary. What king, making war on another, does not first sit down and consider whether he with his ten thousand will be able to meet him that cometh against him with twenty thousand? Relatively speaking, the physician stands in the same relation to disease as does the diplomatist, the statesman, and the warrior to an avowed enemy. The first tries by all the cunning artifices in his power, and in advance of other means, to get an advantage over the enemy without bringing on a general engagement. He is our intrepid sanitarian. Should the conflict be imminent, the battle on, the statesman will learn the character and strength of the enemy, and thus be ready to lend a helping hand. This is our ready diagnostician. The warrior will so use the forces at his command, by maneuvering aud attacking, as to get the speediest victory with the least possible loss. He is the skillful therapeutist.

*Read before the District Medical Society of Northern Ohio, November, 1891.

And as all these great qualities are combined, they together make one of nature's grandest noblemen—the general practitioner.

In order to economize time and avoid the customary routine, I will reduce to four propositions all that will be necessary to mention in this connection. The same will be the groundwork of the most controverted points as regards the ætiology, pathology, and treatment of these fevers. These propositions, reduced to the form of direct questions, have been submitted to a large number of physicians in the different sections of the Union; included in this number were some of the most eminent and gifted. Their answers to these queries were in every case returned, and were in language clear and concise, and their opinions are most assuredly entitled to a careful consideration.

The first query submitted was: "Have the symptoms of the autumnal fevers materially changed in recent years?" The weight of evidence is a little in favor of the affirmative. Professor Loomis, of New York, replies: "I think fevers are assuming more and more new specific types." This declaration is substantiated by Professor Vaughn, of Michigan, and others, and denied as strenuously by Professors Mays, of Philadelphia; Whittaker, of Cincinnati; Scott, of Cleveland; and N. S. Davis, of Chicago. This fact, however, was apparent to all, that the medical literature of the day abounds with the cry for help and more light in the discrimination of these fevers. Many, in giving the details of a strange case, wind up with the inquiry: "Was it typhoid?" We are led to believe by our own experience, added to that of the most advanced thinkers of the age, that types do change with the years and the surrounding conditions. In the locality where I practice malaria was indigenous. It prevailed to an alarming extent between 1872 and 1877. In the beginning of the epidemic the proportion between intermittent and remittent types was ten to one. Five years later the proportion was exactly the reverse, and during the last twelve years not a single case of intermittent fever presented itself, although the environments were exactly the same, as far as could be ascertained. In the meantime typhoid has manifested itself, and is in proportion to remittent as five to one; the ensuing autumn it is as ten to one. A case of typhoid was extremely rare, while malaria was rife. There have certainly been changes in this locality.

I have been informed by a physician who is located in Alabama, near the Tennessee River, where malarial fevers usually prevail, that cases are now extremely rare. On the other hand, he treated more than one hundred cases of what he termed a mixed type in a single year. The cinchona salts had very little effect on the course of the disease, yet he felt loth to call all these cases typhoid. I have also been informed by physicians from our neighboring city, Ashland, where these fevers are now endemic, that the symptoms do not improve under the quinine treatment. Although very few cases manifest the characteristic abdominal symptoms of typhoid, some are led to classify these fevers with a type Professor Loomis terms "filth fevers." They are evidently, like many others, difficult of classification. A practitioner in the Southwest has a unique way of disposing of these peculiar cases. He says: "All of my cases that get well under the specific treatment I call remittent; those that do not improve or die I call typhoid." Professor Stilla is quoted as saying of these mixed types: "If the fever tends to recovery, it changes to intermittent; if it tends to death, the patient sinks into the typhoid state. The typhoid state of malaria has been absurdly called typho-malaria." Much here depends upon whether his typhoid state shows any of the characteristic abdominal lesions of that fever. In other words, is it a mere symptom or a complication? The two diseases in question may, and do, actually exist at the same time in the same individual.

The second question submitted was: "Do you employ antipyretics?" There are yet a few who believe that fevers are in some way conservative; how this is brought about is not so easy of demonstration. Some one has found an analogy between this procedure and burning a house down to kill the vermin. The analogy, however, is not complete, for the house might burn completely and yet the vermin remain. A certain proportion use only external applications to reduce high temperature. Nearly all use internal rem-

edies as well as external applications for their antipyretic effect. They are esteemed in the order in which they are named—quinine, analgesin, acetanilid, salicylate of soda, digitalis, and a few others. Some of our best authorities, however, only recommend their employment in case the temperature rises above 104° F. The coal-tar derivatives are strongly condemned by some, and this feeling is growing in strength.

Allow me to add from my own experience that there are stages and conditions where it would be extremely hazardous to employ the above remedies in antithermal doses. In such cases, and even under ordinary circumstances, I have found a good substitute in opium. It should be given in small and oft-repeated doses. I have succeeded with this remedy when others failed, yet would not advise its indiscriminate use on account of its peculiar effect on the digestive system.

The third question relates to the employment of internal antiseptics. This relates to the true ætiology and pathology of these fevers. There is a vast difference of opinion, even among those who stand high in authority, as to the true origin and mode of action of the fever germs. Many deny the possibility of a spontaneous production. But Dr. Murchison, an excellent English authority, declares to the world that "typhoid may arise from the products of fermentation of healthy fæces." Dr. Vaughn asserts that "wherever man builds his habitation, pollutes the soil about him, the air he breathes and the water he drinks, with his own excrement, there enteric fevers may abound." It would be extremely difficult otherwise to account for the many cases that occur in isolated regions. Whatever may be the cause, immediate or remote, direct or indirect, whether it is due to the potency of the bacillus of Eberth or Klebs, ptomaïne or leucomaïne, very few are lauding the antidotal properties of the so-called antiseptics. Dr. J. W. Irwin, of Louisville, Ky., says on this point: "There is no remedy that will shorten the course of these fevers, and none that will aid the powers of Nature to effect a cure in uncomplicated cases." "Again, it cannot be truthfully said that there is any method of treatment with a view of getting rid of the poison which, at the same time, improves the condition of the patient."

"Is the so-called typho-malaria a distinct form of our autumnal fevers?" is the fourth query, and has been answered in the negative three to one. Profs. Scott, Whittaker, and Loomis prefer the term "continued malarial fever." Dr. John S. Billings writes from the Surgeon-General's office at Washington, D.C.: "Typhoid fever may certainly attack a person suffering from or with malarial fever, and *vice versa*, and the complication thus arising is what I call typho-malarial fever." Prof. Loomis recognizes a distinct form of fever which he terms "filth fever," and which resembles both the other named fevers in a remarkable degree. Nosologically considered, therefore, there are several fevers which resemble each other, or may be associated with each other in the same person. A careful discrimination should always be made, the spurious weeded out, and only the genuine reported.

To summarize briefly:

1. These infectious fevers are due to some specific germ, the nature and source of which are not yet fully understood.

2. These poisons determine modifications of that mysterious force called vital action.

3. They find an entrance into the system through the water we drink, the food we eat, and the air we breathe, but mostly from the first-named source.

4. The remote effects are probably due to the presence of the bacillus typhosus.

5. The gastric juice and some other alimentary secretions must possess some antidotal properties.

6. When these secretions are deficient in quality or quantity, the patient is more susceptible to the morbific influence.

7. Cases probably originate spontaneously without the introduction of the specific fever germs.

8. The naming of new types from symptoms leads to confusion.

9. An early and correct diagnosis is of great importance.

10. These diseases can often be prevented by the employment of judicious sanitary measures.

11. The internal use of the vaunted antiseptics has led to disappointment.

12. The judicious employment of antipyretics is of vital importance.

13. The best results are obtained by treating symptoms as they arise, and the early use of supporting measures.

14. Opium is the best single remedy at our command.

15. The same remedy may prove more beneficial in the hands of some than others, owing principally to a better knowledge of the disease, the agent employed, or to individual peculiarities.

In conclusion, allow me to add that, although we are ofttimes mystified and obliged to grope our way in darkness profound, figuratively speaking, much has been accomplished in years not remote to aid us in more successfully diagnosing and treating these diseases.

Let us be hopeful. We live in a progressive age. Many hidden truths will yet be revealed, many different problems solved. Thank God! there is an army of noble and energetic physicians who are expending their best energies, sacrificing their all, their brightest hopes and fondest aspirations, for the good of common humanity! Their lofty purposes will never be abandoned, their zeal will never abate, their labors never end until success shall crown their every effort, until future generations of M.D.'s shall walk in bright light as the noonday sun. All honor, then, to these heroic men, and we will hail with gladness the advent of the glorious consummation.

Pavonia, O.

MEMORANDA ON THE USE OF HYDROGEN PEROXIDE.

BY C. M. FENN, M. D.

A previous application of a fifteen-volume solution will be found to greatly facilitate the detachment of mucus and muco-purulent secretions from the nares and the cervix uteri, and otherwise prepare the mucous membranes for further medication. In the treatment of burns and scalds it seems to promote cicatrization. I may cite the case of a child, scalded from brow to pubes by tipping over a pot of boiling tea, the derma being exposed in many places. The dressings of white lead were repeatedly torn off, including the cuticle. Yet frequent applications of the peroxide of hydrogen apparently forestalled suppuration, so that in two weeks the wounds were healed!

Correspondence.

DETERMINATION OF SEX.

Editor MEDICAL AGE:

Wilson (Lancet, September 26, 1891) proposes the theory that the sex depends on the nutritive perfection of the ovum at the time of conception. To this Dr. Lussier (MEDICAL AGE, January 11, 1892) demurs, and says: "To my mind the determination of sex depends upon the decubitus of the woman at the moment of impregnation." This may be called the gravitation, or mechanical theory. It is untenable in giving no consideration to the migratory power of spermatozoa, or the physiological forces of a vigorous sexual apparatus in the female. It is insufficient in that it presumes conception to take place at the instant of intercourse. Careful inquiry and observation by the present writer, extending over a period of thirty years, leads to the conclusion that sexual intercourse (in this country at least) does not usually take place in the right or left, but in the dorsal decubitus.

Histories of ovariotomy cases show the conception of both sexes indifferently after removal of one ovary.

A considerable number of men who have lost one testicle are the fathers of families representing the usual proportion of children of each sex.

Experimental removal of the right or left ovary and testicle respectively in pigs affords proof of the continued conception of offspring of both sexes.

The writer has known a few women who were conscious of alternate right and left ovulation. Facts might be collated from such persons to show the sex of conceptions of each kind.

As most conceptions take place after menstruation, Wilson's theory may throw light on the numerical disproportion of the sexes.

We really know little, or nothing practical, regarding the question of the determination of sex. It is the secret of Nature—her own high prerogative, guarded in her holiest sanctuary, that no profane hand may touch or control it; akin to that other question, the "Origin of Life," of which we know as

little as of its ultimate development or its final destination. W. E. MOORE, M. D.

Starfield, Mo.

A NEW DISCOVERY.

Editor MEDICAL AGE:

Please announce in your next issue of the MEDICAL AGE that I have succeeded in showing and demonstrating the parasite causing chalazia to form in the Meibomian glands of the lids. You may be aware that physicians thought for a long time it was a mere retention cyst. Pathologists soon showed it to be a granuloma. This discovery, however, added difficulty to the subject of ætiology, because all admitted that long-continued irritation was necessary for the production of granulation tissue.

The fungus explains all this. It is made up of a heavy mycelium, and produces abundant spores.

A section placed in a few drops of a 33-per-cent. solution (aqueous) of caustic potash will soon dissolve, especially if gently warmed. The mycelium alone remains. The demonstration is exceedingly simple.

I have given the parasite the name of Fungus Chalazicus. M. F. WEYMANN.

St. Joseph, Mo., Feb. 1st.

AN INVIDIOUS SUGGESTION—THE RETORT COURTEOUS.

Editor MEDICAL AGE:

A prominent Detroit divine was speaking recently at a private dinner party of the poor ventilation of some churches, and of the heavy, oppressive smell that arose from a crowded, ill-ventilated building; adding that in such cases he could tell every man's business by the odor emanating from him—the leather merchant smelling of leather, the dry goods man of new linens, the hardware merchant of iron, and so on. A medical man present asked by what odor he distinguished physicians. A young lady in the group interposed immediately: "Undoubtedly iodo(r)form." The divine admitted that occasionally that was a distinguishing mark, but added that "more often it was *eau de(r) vie*." The doctor retorted that unfamiliarity with "the odor of sanctity" must have prompted both suggestions, as the latter was, in his experience, a much more common emanation of the profession than either of the others.

A READER OF THE AGE.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

B. W. PALMER, A. M., M. D., Editor.

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Editorial.

THE BACILLUS OF INFLUENZA.

In the AGE, January 11th, our readers were informed of the press despatches announcing Dr. Richard Pfeiffer's reputed discovery of the influenza bacillus.

Since that date advance sheets of the Deutsche Medicinische Wochenschrift, containing Dr. Pfeiffer's preliminary communication, have been afforded the press.

From this report it would appear that the influenza bacillus has been successfully proved and cultivated at Koch's Institute for Infectious Diseases, at Berlin.

The reasons adduced for the failure to previously identify this specific bacillus are its small size and difficulty in staining and making a pure culture of it.

Dr. Pfeiffer's report is based on the examination of thirty-one cases of influenza, in six of which a necropsy was made.

In all the cases a bacillus of a definite species was found in the purulent bronchial secretion.

These bacilli were found exclusively in cases of influenza. Control examinations proved their absence in ordinary bronchial catarrh, pneumonia, and pulmonary tuberculosis, and with the cessation of the purulent secretion the bacilli began to disappear.

The characteristic influenza bacilli are in the form of tiny rodlets, three or four strung together, chain-like.

While Dr. Pfeiffer at the time of his report had only succeeded in carrying the cultivation of these bacilli beyond the second generation, Dr. S. Kitasato has been successful in cultivating them to the fifth generation on glycerin-agar.

Dr. P. Canon, assistant physician in the Hospital Moabit, Berlin, has examined the

blood of twenty influenza patients under the directions of Dr. P. Guttmann, and these experimenters are of the opinion that this specific micro-organism occurs in the blood of all influenza patients having fever, and stands in direct relation to influenza.

The practical lesson to be derived from the researches thus far undertaken is that the sputum of influenza patients should be subjected to adequate disinfection.

THE MEDICAL PRACTICE LAWS CHANGED BY LEGISLATION DURING 1891.

Henry A. Riley, A.B., LL.B., contributes to the Times and Register, Jan. 23d, 1892, a record of the advance made in the direction of restricting the practice of medicine to those properly qualified. It is interesting to learn from this record that the medical practice laws of several of the States were amended by the Legislatures holding sessions in 1891, and, in two or three, statutes were enacted providing for new methods of examination and licensing. In several others, bills were presented and strongly urged, but failed of passage for one reason or another. It is gratifying to note also the general desire manifested by the profession and by the public at large to place proper safeguards about the entrance into medical practice, and it will not be long, probably, before most of the States will require an examination in addition to a diploma, in order to enable a person to obtain a license to practice; or, if this is stating the case a little too strongly, it will not be long before there will be State Examining Boards for all persons not graduates of medical colleges in good standing. At present there are no laws on the subject in Connecticut, Kansas, Maine, Massachusetts, Rhode Island, and Utah, but bills have been prepared in several of these States, and will be presented to the Legislatures when they convene. In Maryland and Ohio the laws are practically imperative. In Nebraska, South Dakota, Oregon, Indiana, South Carolina, and Tennessee there were amendments made during 1891 to the laws previously in force, tending to the better regulation of practice.

It would appear from these facts that there is a very general disposition in many States to advocate and secure the enforcement of legislation which will restrict the practice of medicine to those properly qualified. The good work already accomplished in this direction, it is hoped, may be auspicious of a good time coming when all States shall enact such laws as shall protect the public and the profession from the dangers they are now exposed to from the practice of unqualified charlatans.

FRAUDULENT EUCALYPTOL—HOW THE MEDICAL PROFESSION IS DECEIVED.

In these days, when manufacturing and proprietary interests are scheming in every way to render the practitioner their bond slave, it behooves the medical man to scan carefully the character of therapeutic agents that are offered (and sometimes forced) upon his consideration. Unfortunately, medicine is not an exact science, and to this is due much of the opprobrium attaching thereto, hence every act or agent that tends to render it more inexact is one that adds to the existing evils, even though the sum of these evils has its origin in misconception and ignorance.

For a decade or more, patent and proprietary medicine interests have been steadily working to cover their sinister designs with a cloak of, at least, quasi-respectability, and many overt and covert schemes have been "worked" to secure the confidence, if not the direct aid, of scientific medicine.

Thus therapeutics are burdened with an appalling list of proprietaries, a few perhaps possessed of some merit, others of none at all, and a still greater number masquerading under fancy, false, and deluding titles; further, all are knocking with a degree of insistence scarcely appreciable in its magnitude, for recognition by the Pharmacopœia—are being thrust thereupon forcibly, as it were, and with all the powerful enginery of monetary backing, political interest, bribery, subversion, subornation, etc. The fact is, the majority are products of no scientific value, and all are put forth to the end of adding to the wealth of their utterers and promoters, without the least regard or care as to the actual results (good, bad, or indifferent) that may obtain to the ill and afflicted. Indeed, it is terrible to contemplate the criminality that thus

juggles with the ignorance of a community, and more than all with the ills of humanity, merely to gratify an ever increasing lust and greed.

We are led to these remarks, in view of a recent expose regarding a product, in the United States termed "eucalyptol," put forth by an Australian firm of manufacturers, who are attempting to force this article upon the market, and upon the medical profession, by means of gross misrepresentation. This expose appeared in the Bulletin of Pharmacy for October last, being supplemented in the January number. We recommend the perusal of the papers to all medical men, and, likewise, the replies of the Australian firm that appeared in the intervening numbers.

True eucalyptol is a medicament of known specific chemical combination, valued at about $1.00 per ounce. But this factitious and trade-marked product, which is marketed under the name of "eucalyptol" and advertised throughout Australasia as a proprietary medicine, under the title of "eucalyptus extract," and on occasion claimed as an exclusive oil of eucalyptus globulus, and "only oil derived from eucalyptus leaves," proves to be merely a common place eucalyptus oil, not an exclusive globulus, and by no means the best oil in the market, with a value of perhaps ten or twelve cents per ounce. The title "eucalyptol" is apparently assumed in order to market the product at the price of eucalyptus camphor (true eucalyptol). Its proprietors, with unparalleled impudence, declare they are only firm on the globe "using exclusively leaves in the preparation of eucalyptus oil;" and, further, that they are the "only manufacturers of pure eucalyptol in the world." The papers in the Bulletin of Pharmacy prove incontestably the falsity of all the claims made by Sander & Sons for their product; and, further, show that the evidence the firm cites in support of its product is largely factitious —that is to say, almost wholly garbled, distorted, or manufactured.

Circulars have been distributed broadcast throughout the country by Sander & Sons, embodying a purported translation by Prof. Hugo Schulz, of the University of Bonn; and translations of extracts from papers by Prof. Dr. Mosler, of the University of Geifswald; both of which are made to appear especially laudatory of the Sander product. The name of the purported translator is given as "Sander, M. D.," of Dillon, Iowa, a member of the firm of "Sander & Sons," its advertising manager, and distributor of its product. Yet, the Sanders claim he is a disinterested observer, and not connected with their firm. For the extent of the duplicity of the Sanders, and their unwarranted use of the names of two eminent German professors, we refer our readers to the Bulletin of Pharmacy, and as partial evidence here reproduce in parallel columns the real utterances of Dr. Mosler, and the same as garbled and sent forth by the Sanders:

DR. MOSLER'S OWN WORDS:	AS GARBLED BY SANDER & SONS:
"A forester living in the neighborhood of Stettin and his wife had been suffering for six weeks from what was held to be an incurable form of diphtheria. Despite the 'most energetic' treatment, the disease did not give way. The local caustics, consisting first of concentrated solution of carbolic acid, and subsequently of salicylic acid, were lavisbly applied several times daily by the domestic to the mucous membrane of the pharynx. As a result, not only did new wounds arise on the mucous membrane, but the cure of the existing diphtheritic ulcers was also retarded. After cessation of this energetic treatment, cure followed in a short time the *inhalations of vapors of salt water*, as warm as possible, alternating with those of diluted solution of salicylic acid.	"Prof. Dr. Mosler, Director of the Medical Clinic at Greifswald, says in a treatise on affections of the throat and chest, published some time ago in the Berlin Klin. Wochenschrift, that among the preparations purporting to be *ol. euc. e foliis*, Sander & Sons' manufacture is the sole product deserving of the name, and affirms that the use of the preparation procurable under the style of 'oil eucalpytus' is abandoned by him.
* * * * * * *	* * * * * * *
"The oleum eucalypti used by me was procured by Apothecary Kuntsmann, of Messrs. Hoelzle & Chellius, of Frankfort-à-Main.	"Prof. Dr. Mosler, Director of the Medical Clinic of the University at Greifswald, says in his report on diphtheritis, published in the Berlin Klin. Wochenschrift, 1879, No. 21: 'All cases of diphtheritis treated by me with ol. euc. e foliis (Sander & Sons) have, without exception, proved successful. I believe that the drug affords the means to avoid that exciting and poisonous irritability the treatment is always complicated with when carbolic acid, salicylic acid, etc., are applied. How disastrous these complications may become I had lately opportunity to witness. The patient, seen by me in consultation, was suffering since six weeks from a form of diphtheritis believed to be incurable. In spite of the most energetic treatment, it was impossible to conquer the disease. Concentrated solutions of carbolic acid in the first place, then extensive applications of salicylic acid, were brought upon the membrane of the throat, but all without any effect, except to produce new wounds in addition to the already existing diphtheritic sores. This treatment was discontinued, and on *inhaling vapors of ol. euc. e foliis* a quick turn towards recovery was effected."
* * * * * * *	
"The cases of pharyngeal diphtheria thus far treated by me with oleum eucalypti have all had a favorable issue. But I would *by no means* on that account recommend this method of treatment as a universal remedy. I too have unfortunately had the experience that at certain times in some epidemics there are cases of diphtheria so sudden in their development that from the very beginning all forms of treatment seem to be fruitless. I do not, therefore, feel justified in cherishing the hope that the proposed method of treatment with *inhalations of eucalyptus oil will be rewarded with assured success.*"	

Surely there is a broad gulf between the statement of Dr. Mosler, that patients re-

cover under the use of "*inhalations of salt and water*," and that put in his mouth by the Sanders, that they recovered by the use of "inhalations of ol. eucalyptus e foliis, Sander & Sons."

In the October Bulletin of Pharmacy appears a letter from Dr. Hugo Schulz, in which he repudiates the Sanders and their product in toto; a like communication from Prof. Dr. Mosler appears in the January issue, and, further, a copy of a letter addressed by him to the Sanders, commanding them to cease the use of his name, as it is unauthorized, and he has no knowledge of their product.

As further evidence of the extremes to which the proprietary medical interests will go, there will be found in the Bulletin of Pharmacy for November, and December what purports to be replies to the paper in the October issue of the same journal. As a matter of fact, no attempt is made to reply to the charges formulated, but the same false assertions attributed to Prof Mosler are re-stated, and an attempt made to saddle upon this gentleman's shoulders all the dishonesty of which the firm has been guilty.

A more colossal attempt to deceive the medical profession has rarely been conceived, and this exposure must be viewed with general satisfaction.

The foregoing also teaches a trite lesson, viz., that members of the medical profession cannot be too careful in giving support and certificates to purported therapeutic products. The Sanders sent circulars broadcast to physicians throughout the country, asking for reports of their experience with "eucalyptol," no hint being given of the Sander product; and the replies, given honestly as to true eucalyptol, have been made to do duty as evidences of the virtues of a factitious article, the words "Sander & Sons'" being in every instance interpolated. In some instances certificates have been apparently deliberately manufactured. Many that have appeared are repudiated in toto by those whose names are attached thereto, and other names are proved to have no existence.

In a circular sent out by "Sander, M. D.," of Dillon, Iowa, and dated Sandhurst, Australia, July, 1891, appear the names of 85 purported medical men, who are proclaimed as supporters of fictitious eucalyptol. One name was employed twice, which leaves properly 84. An analysis of this list shows the character of evidence which is relied upon by proprietary medicine manufacturers to support their products. Four names after close investigation appear to have no tangible existence. Nineteen are arrant quacks devoid of medical qualification. Thirty-three are doubtful, that is to say, cannot be found in Polk's Register, or in directories, hence may be presumed to have no existence; or perhaps are new graduates, consequently without experience and incompetent for evidence. In five instances there is no such name or post-office as that given. Of those having authority to practice medicine, eight wholly repudiate the Sanders and their product; twelve have their names or addresses distorted—possibly the Sanders know why; and there remains a total of but three individuals of presumed reliability unaccounted for. From these three may be deducted the name of Dr. Bartholow, which is made to do duty as a quotation from the "Medical Brief," but as it appeared in that journal bears unmistakable evidence of being an advertisement. The character of Dr. Bartholow is sufficient evidence he never knowingly lent his name to such disreputable procedure.

A SECRETARY OF PUBLIC HEALTH IN THE PRESIDENT'S CABINET.

The sentiments expressed by the medical press are unanimously in favor of the proposed addition to the Cabinet of a National Secretary of Public Health, as embodied in the petition put forth by a committee of the American Medical Association.

Senator Sherman has introduced a bill in the Senate providing for the establishment of a Department of Public Health under the charge of a medical officer, to be appointed from civil life by the President. This department shall obtain from consular officers at foreign ports all available information in regard to the sanitary condition of such ports and places, and also all information accessible from State and municipal authorities of the sanitary condition of places in

the United States. All the information gathered is to be embodied in the form of a bulletin, and transmitted weekly to the marine hospital service, collectors of customs, and to State and municipal health officers. The department shall also procure and tabulate statistics relating to marriages, births, deaths, the existence of epidemic diseases, and all information relating to climatic and other conditions affecting public health. The department is co-operative with State Boards of Health, the signal service, the medical department of the army, and other branches of the government, and will utilize the results so as to make the new department a repository of public sanitary comfort.

The question having arisen whether such a department would subserve the interests of any particular school, the New York Record fittingly and fully answers:

"Amid all the apparent disparity in medical practice, there is one true, severe unity, and to attain this all true physicians are continually striving. There is no disputation in medical science about anatomy, physiology, pathology, chemistry, physics, or preventive medicine; the difference among doctors lies in therapeutics, or the treatment of disease, and as in the past, so for all the future, practitioners will use a variety of remedies and in varying quantities, and there will be different modes of management of sick or injured people. With the advance in the way of education, the differences in treatment will gradually become more unified."

As evidence of the popularity of this additional guard to the public health, John W. Noble, Secretary of the Interior, has expressed these sentiments in a letter to the editor of the Cincinnati Lancet and Clinic:

DEPARTMENT OF INTERIOR,
WASHINGTON.

JANUARY, 13th, 1892.

I think well of the purpose of your Association to establish a Department of Public Health. The Bureau of Agriculture has grown to be a department whose Secretary is a cabinet officer, and the last President's message declares it to have proved the necessity for its existence.

The Bureau of Education, under Dr. Harris, is rising in public esteem constantly. I send you the last report of the Commissioner.

That the public health rivals either of these, or others that could be named, in importance to the public welfare and the people's safety, no intelligent person can dispute.

Individual effort has done wonders in detecting the sources of danger to communities, and the discussion of such discoveries has interested every household. But, liberal as the medical profession is and has, in our country, proved itself at all times to be, it is not fair or politic for us to leave it unsupported and nationally unrecognized. The international communication of intelligence that would follow the organization of a Bureau of Public Health would not only preserve our own inhabitants from many physical ills, but would greatly serve to strengthen the sympathy between all civilized peoples, who would correspond and co-operate with us. They would feel the same beneficent influences of the system we would realize.

The subject is worthy of statesmanlike treatment, and should not longer be subordinated to our other material interests. What will not a nation, as well as a man, "give in exchange for life"?

You and your associates have my most earnest sympathy, and, if I can, I will aid you. I remain, sincerely yours,

JOHN W. NOBLE.

The medical profession should unite in using all the influence they possess in furthering this national recognition of public health interests. Such a national medical officer would have it in his power to do much toward the prevention and to obviate the extension of contagious and infectious diseases.

SELF-MEDICATION.

The editor of the London Lancet sounds a timely warning against the dangers of self-medication in influenza.

It cannot be too widely known that such a course is fraught with danger from the possibility of serious but insidious complications being overlooked, and from the fear lest any of the remedies resorted to be employed in overdoses. The most casual reference to any work dealing with the synthetic compounds will show that they possess toxic properties, and this alone should cause those addicted to self-medication to pause before they act upon the statements in an advertisement, or in the columns of the daily press. It is true that certain drugs relieve pain and reduce temperature, but it is equally true, unless they are employed by persons who are properly informed, disastrous accidents will occur.

Book Notices.

SCRIBNER'S MAGAZINE FOR FEBRUARY.

"A Portrait." Frontispiece. (See American Illustration of To-day). From a Pastel by William M. Chase.

"Station Life in Australia." By Sidney Dickinson. Drawings by Birge Harrison; engraving by Van Ness, Schüssler, Peckwell, and M. J. Whaley.

"The Wrecker"—Chapters XVI–XVII. By Robert Louis Stevenson and Lloyd Osbourne. (Begun in August, 1891—to be continued.) With a full-page illustration by W. L. Metcalf.

"A Model Working-Girls' Club." By Albert Shaw. Drawings by W. L. Taylor; engraving by E. H. Del'Orme.

"If It Could Be!" By Octave Thanet.

"Illusions of Memory." By William H. Burnham.

"American Illustration of To-day"—Second paper. By William A. Coffin. With examples of the work of Robert Blum, H. Siddons Mowbray, Irving R. Wiles, H. Bolton Jones, Bruce Crane, F. D. Millet, E. H. Blashfield, J. H. Twachtman, and Theodore Robinson.

"Asleep Upon the Grass." By Ella Woodworth. With a drawing by Wyatt Eaton.

"The Revenue-Cutter Service"—I. Its Work in the Relief of Vessels in Distress. By Percy W. Thompson, Lieut., U. S. R. M. II. Some Typical Rescues by the Revenue Cutters. By Samuel A. Wood. With drawing by W. B. Styles; engraving by C. I. Butler.

"So it is True." By Rose Hawthorne Lathrop.

"Washington Allston as a Painter"—Unpublished Reminiscences of Henry Greenough. With engravings from paintings by Allston.

"An Adventure in Philanthropy." By Edwin C. Martin.

"The Arctic Highlander." By Benjamin Sharp, Ph. D. With drawings by O. H. Bacher and J. H. Twachtman; engraving by M. J. Whaley.

"The Complete Dutch Kitchen-Maid"—A Picture of Holland a Century and a Half Ago. By Cornelia J. Chadwick.

"Comfort of the Fields." By Archibald Lampman.

"The Commonest Possible Story." By Bliss Perry.

"The Point of View." The Dangers of Comfort—Laughter and Democracy—The Mysteries of Life—Browning in the Future.

TREATISE ON GYNÆCOLOGY, MEDICAL AND SURGICAL. By S Pozzi, M. D., Agrégé à la Faculté de Médecine, Paris. Translated with additions by Brooks H. Wells, M. D., Lecturer on Gynæcology, New York Polyclinic. Volume I. With 305 wood engravings and six full page plates in color. Published by Wm. Wood & Co., New York. 1891.

No stronger evidence of the giant growth of gynæcology could be produced than that at the present time a complete consideration of the present status of this branch of medical and surgical practice requires two volumes of upward of eleven hundred pages to adequately cover existing knowledge of the gynæcological art and practice.

Volume I, before us, comprises 581 pages, presenting modern views of the following subjects: Antisepsis, Anæsthesia, Control of Hæmorrhage and Closure of Wounds, Drains and Tampons, Examination of the Patient, Metritis, Fibroma of the Uterus, Carcinoma of the Uterus, Displacements of the Uterus, Deformities of the Cervix, Atresia, Stenosis, Atrophy, Hypertrophy, Disorders of Menstruation.

The author has availed himself of the researches of authorities of all nationalities, and with rare discernment has utilized all available clinical material, thus making the work cosmopolitan in character and a comprehensive guide to the most modern and advanced methods sanctioned by the teachers of this art.

The translator has confined his work to adding editorial notes where essential, substituting for certain cuts of specula, complicated examination tables, and pessaries appearing in the original, others considered more desirable. Six full page colored lithographic plates appear in volume I, and nine are to be inserted in the forthcoming second volume.

The bibliographical references are very comprehensive and complete, and appear at the end of each chapter.

The work gives promise of being the most comprehensive and complete record of modern gynæcology that has ever been presented.

LOVE AND MARRIAGE IN JAPAN

Sir Edwin Arnold, who has been enjoying an interesting trip through the United States, has made a careful study of the conditions which govern the family in Japan, and embodies his ideas in a paper called "Love and Marriage in Japan" in the February number of the Cosmopolitan. The article is illustrated by the quaintest possible Japanese sketches running down the sides and across the bottom of each page. An excellent photograph of W. D. Howells serves as a frontispiece, and his excellent work as a writer of fiction is reviewed in the same number by H. H. Boyesen. The President of Johns Hopkins University gives a most practical paper for parents on "Boys and Boys' Schools," illustrated by cartoons of the famous Attwood. Murat Halstead turns back lovingly to his early farm days, and tells of the "Pets and Sports of a Farmer Boy." The petroleum industry fully illustrated; An Afghan Story, by Archibald Forbes; The Story of the Brazilian Republic, by Adams, late Minister to that country; and The Leading Amateurs of the United States in Photography, are other leading articles of the month.

ANNUAL REPORT OF THE POSTMASTER-GENERAL OF THE UNITED STATES FOR THE FISCAL YEAR ENDING JUNE 30TH, 1891.

This very comprehensive report of the status of this department of the Government shows that the usual annual deficit in the finances of the department is gradually but surely disappearing. It amounted for the last year to only a little more than $6,000,000, and that, too, in spite of the fact that the revenue suffered a loss of over $1,000,000 owing to the passage of the anti-lottery bill; and the estimates for 1893, which have been prepared for the information of Congress, show that the service (which, as is clearly indicated by the report, has been made to improve, even at a lower cost) will reach a self-sustaining basis about July 1st, 1893. The increase of the revenue last year, in spite of the loss on the transportation of lottery mail, is over $5,000,000.

ADDRESSES AND ESSAYS. By G. Frank Lydston, M.D., Professor of Genito-Urinary Diseases and Syphilology, Chicago College of Physicians and Surgeons.

Dr. Lydston's contributions to the literature of genito-urinary diseases always command a wide reading.

It will be of interest to medical readers to have the essays gathered under one cover, that they may be read with more leisure, profit, and pleasure than when they were scattered through the pages of various medical journals.

They contain much that is novel, practically helpful, and suggestive, and we can heartily commend them to our readers for perusal. They may be obtained from the publishers, Fred. Klein & Co., Chicago, Ill.

THE PRINCIPLES OF BACTERIOLOGY, A Practical Manual for Students and Physicians. By A. C. Abbot, M. D., First Assistant, Laboratory of Hygiene, University of Pennsylvania. With Illustrations. Lea, Bros. & Co., publishers, Philadelphia. 1892.

This book of 263 pages is prepared by the author to meet the requirements of those who undertake the study of bacteriology with the view of utilizing the knowledge obtained in medical practice. It is restricted to those fundamental features that are essential to obtaining this knowledge. Experiments are suggested to illustrate the salient features of the work, and to develop in the student the faculty of close observation. It is a readable and understandable guide to the principles of bacteriology.

TRANSACTIONS OF THE OPHTHALMOLOGICAL SECTION OF THE AMERICAN MEDICAL ASSOCIATION, AT THE FORTY-SECOND MEETING HELD AT WASHINGTON, D.C., MAY 5–8, 1891.

This volume of 380 pages shows evidence of very careful editing and issuing. It is well printed and bound, and comprises many valuable contributions to ophthalmology. If all Sections of the Association could arrange to have their proceedings published in such admirable form, such volumes would be treasured in all medical libraries, and become not only an important part of the medical

literature of the future and a valuable record of current progress, but serve to stimulate the members of Sections to thus record their best thoughts and work.

ESSENTIALS OF MEDICAL ELECTRICITY. By D. D. Stewart, M.D., Demonstrator of Diseases of the Nervous System and Chief of the Neurological Clinic in the Jefferson Medical College, and E. S. Lawrance, M.D., Chief of the Electrical Clinic and Assistant Demonstrator of Diseases of the Nervous System, Jefferson Medical College. With 65 Illustrations. Published by W. B. Saunders, Philadelphia. 1892. Price, $1.00.

This book comprises a *resumé* of the distinctive points elucidated in the works of Erb, De Watteville, V. Ziemssen, Beard and Rockwell, and others. For the student it affords an intelligible explanation of the essentials requisite to the medical application of electricity.

MICROSCOPICAL DIAGNOSIS OF TUBERCULOSIS. By Paul Paquin, M.D. Published by Little Blue Book Co., Battle Creek, Michigan. Price 50 cents; postpaid, 55 cents.

This little brochure of 48 pages presents very clearly the methods of diagnosing tuberculosis by microscopic examination of the sputa.

It contains three colored plates, showing characteristics of the bacillus tuberculosis and of other bacilli found in sputum.

The subject is tersely considered, and will afford the physician the essential features of methods of determining with certainty the bacillus tuberculosis.

STRICTURE OF THE RECTUM. A Study of One Hundred and Thirty-eight Cases. By Charles B. Kelsey, M.D. Second edition.

This is a brochure of 48 pages, issued by the author, presenting very completely his views as to the treatment of rectal stricture. His wide experience enables him to speak with authority.

ESSENTIALS OF MEDICAL PHYSICS. By Fred J. Brockway, M.D.

This is No. 22 of Question Compends issued by W. B. Saunders, Philadelphia. It is arranged in the form of questions and answers prepared especially for medical students. It contains 155 illustrations, an ample index, 530 pages, and is sold at $1.00.

Notes and News.

Why?—

[THE WAIL OF AN EXASPERATED BUT LOYAL M. D.]

Oh, when from his nostrums and medical fakes
The "patent" man's fortune immense is,
Oh, what in the world is the reason it takes
Every cent I collect for expenses?

Oh, when the gudewife of the opulent quack
Her satins and silks is parading,
Oh, why has my wife but two gowns for her back,
And the best of them dingy and fading?

Oh, when the brigades of fibromatous folk
Are swelling the cancer quack's coffers,
Oh, why am I thankful in caustic to soak
Some verruca that accident offers?

Oh, when, before deigning his patients to ease,
His fee in advance the quack collars,
Oh, why do I have, when a patient I seize,
Such a long, weary chase for my dollars?

Oh, when yon galenical humbugs galore
Stroll gaily through rose-fragrant places,
Oh, why do I wander, all worn and foot-sore,
In a desert that has no oasis?

***

Because in the days of my youth I was taught
A principle timely and healthy,
And for quackdom's success I've no envious thought,
For I'd rather be honest than wealthy.

—*Tommy Dod.*

A Novelist's Tribute to Physicians.—

The Medical Progress calls attention to a tribute to physicians, by E. P. Roe, in a recent novel, "The World Against Her." Alluding to the great credit that has been awarded to the priesthood of the Roman Catholic church for the faithfulness with which they have concealed in their own breasts the gravest secrets communicated to them at the confessional, Mr. Roe says: But who has thought of giving credit for a similar, and perhaps greater, virtue to the physician, who is often made the repository of the most momentous family secrets, reaching from the hour of birth to the latest breath of life, and concerning some dearly beloved member of the home circle? What a profession, what a responsibility is that of the family physician! The doctor is not only the friend and counsellor of the family, where he is regularly called, but its confidant, and the

guardian of secrets of vital importance to the reputation of his patients.

A New Hospital Feature for Preventing the Spread of Infectious Diseases.—

The Medical Press and Circular, November 4th, has a description of a new hospital at Berlin, called the Emperor and Empress Frederick Children's Hospital. The pavilion for diphtherial patients has a peculiar arrangement, which is designed to imprison the contagium of that disease, whether brought there or generated there. This pavilion is entered by what is known as the "schleuse," or sluice. No person is allowed to pass directly into the ward from the outside world, but must pass from the porter's room into the "schleuse." There the visitor must take a bath and change his clothes; the same process must be gone through with on leaving the pavilion. The hope is that not only will these precautions prevent the conveyance of the disease to any one outside the hospital, but also to the inmates of other parts of the institution.—*Jour. A. M. A.*

The Physician in School.—

The New England Journal of Education says is has received many inquiries relative to the proposed plan of daily medical inspection of the schools of Boston. It states that the plan originated with the Boston Board of Health, that it has been successfully tried in Brussels for a number of years, that the City Council of Boston has appropriated $5,000 for the experiment this year, that the Board of Health is ardently in favor of it, but declines to go forward without the sanction and co-operation of the School Board, and that the indications are that this latter body does not think the work could be done with sufficient thoroughness to accomplish anything to justify the interruption it might be to school work. The Sanitarian thinks this matter will ultimately be decided by the physicians upon the School Board. Probably something of the kind will be done in every large American city.

Shall Clergymen Pay the Physician for Services?—

The Medical Record answers this question in the affirmative for the following reasons:

The physician pays the priest for the marriage ceremony, for christening, and his heirs are expected to be ready with an honorarium when mass is said at the funeral of the doctor, when his many deeds of charity are over. Nor does the physician enjoy a free pew in the church of his choice on the score of helping the deserving poor of the congregation. As a mere matter of advertisement for practice it seldom, if ever, pays, as the clergyman in many cases chooses a physician for himself, but for policy sake does not care to recommend one doctor more than another for members of his flock. But, more than all, the services to the priest or minister are valued in proportion to the amount actually paid for them.

A New Suture.—

Dr. Alexander Fulton, in Medical News, January 23, 1892, describes a new suture. Round pieces of amber, about one-sixth of an inch in diameter, of various lengths, are used, perforated as required. Lead, glass, or any material that can be kept thoroughly aseptic may be used. Fine wire (silver preferred), after immersion in carbolized water, is run through the lip of the wound about half an inch from the edge when deep suture is desired, and one-third of an inch when more superficial suture is wanted. It is then put through the bar and clamped with a perforated shot. The lips of the wound are thus by traction brought in perfect apposition.

University of Michigan.—

The first ward of the new hospital of the Medical Department of the University of Michigan was formally opened January 20th by the Governor of the State. An address on "The Hospital: an Element and Exponent of Medical Education" was delivered by Dr. Albert L. Gihon, Medical Director, United States Navy.

The hospital is provided with modern appliances. The ward just completed contains a clinical amphitheater, consultation-rooms, offices, and accommodations for eighty patients. It has cost about eighty thousand dollars. The plan provides for three additional wards, the erection of one of which will begin during the current year.

American Pharmaceutical Association.—

Membership in the American Pharmaceutical Association is obtained only by election at the annual meeting. "Every pharmacist and druggist of good moral and professional standing, whether in his business on his own account, retired from business, or employed by another, and those teachers of pharmacy, chemistry, and botany who may be specially interested in pharmacy and materia medica," are eligible for membership. For blank application and further information, address Dr. H. M. Whelpley, 2729 Washington avenue, St. Louis, Mo., chairman of committee on membership.

The Death Kiss.—

A special request of each person in serious illness should be "Let no one kiss me after I am dead." This need not require that a corpse be regarded with a sense of horror, with which many seem to regard it, but merely as a tenement which the former occupant has left, and which no longer represents him.

The custom of kissing sick people is also very dangerous and should be discountenanced as strongly as possible.—*Med. World*, Feb., 1892.

Death of Sir Morell Mackenzie.—

The press dispatches report the sudden death of this distinguished laryncologist from syncope, consequent upon an attack of influenza. Sir Morell Mackenzie had suffered from bronchitis and asthma, following his recent attack of influenza. His illness, it was considered, had taken a favorable course. He was attended by his brother. His death was very sudden, only his wife being present when it occurred.

A National Medical Practice Law.—

The present system of State examining boards is a nuisance, and there should be some national law to regulate the practice of medicine, so that a competent man may exercise his rights to practice in any State of the Union without being bothered by a little board in every State he may enter.—*American Doctor.*

Therapeutic Brevities.

Anti-fat.—Dr. Griffith reports that he has found the ideal anti-fat in an extract of the berries of *Phytolacca decandra*. He gathers the berries after frost, and expresses the juice, and evaporates it down to a solid extract. The dose is 4 to 6 grains before each meal. He claims to have reduced flesh from 15 to 20 lb. per month, and states that birds feeding on the berries were invariably poor. This is probably owing to the powerful purgative action of the whole of the plant when mature, which is a property common to the order of pokeweeds. In the United States, a tincture of the berries is popularly used for chronic rheumatism, and is considered equal to guaiacum. It is also locally applied in the form of extract to scrofulous and cancerous ulcers, as well as syphilitic sores.—*Quarterly Therapeutic Review.*

Therapeutic Application of Saw Palmetto.—Its indications, gathered from a clinical standpoint, are, in the male, enlarged prostate, with throbbing, aching, dull pains; discharge of prostatic juice; at times, discharge of mucus; also a yellowish, watery fluid, weakened sexual power, loss of thrill, orchialgia, and epididymitis and orchitis, when associated with an enlarged prostate.

In women, weakened sexual activity, ovarian enlargement, with tenderness and dull, aching pains; small, undeveloped mammary glands.

Also indicated in chronic bronchitis, with a wheezing, hard cough, worse on lying down and until 6 A.M.; worse in damp, cool, cloudy weather.—Dr. Mullins in *American Homœopathist.*

Diarrhœa, Chronic.—In an article on *salol* (Med. and Surg. Rep., Jan., 1892), A. Eichler states that 15 grains of salol in an ounce of castor oil, to be given at a dose, is good for chronic diarrhœa. When a pleasanter medication is desired, a tablespoonful of the following is given every hour until the bowels move very freely:

℞ Salol, ʒij.
Oil of ricinum, fl. ʒjss.
Syrup of rhubarb, fl. ʒss.
Pulverized acacia, ʒss., and a sufficient quantity of cinnamon water to make 4 fluidounces.

Treatment of Ringworm.—Dr. Goldsmith writes to the British Medical Journal that, when all other remedies had failed to effect a cure in three cases of ringworm of the scalp, in his own family, he tried Dr. Illing-

worth's method with prompt success. The formula for this strong blistering fluid, one application of which its originator claims will cure an ordinary case, is as follows:

℞ Hydrarg. biniodid. ℥ ss.
Sal. sodii iodidi (1 in 4), ℥ ss.

A small portion of this is to be diluted with three parts of water, at the time of application. It is to be painted on with a camel's-hair pencil.

The Removal of Mother Marks.—The Allgemeine Medicinal Central Zeitung gives the following as very efficacious: Mix one part of tartrate of antimony with four parts of emplastrium saponatum and work into a paste. Apply mixture over the mark to be removed to the depth of one line (one-twelfth inch), and cover with a strip of gummed paper or court plaster. On the fourth or fifth day suppuration sets in, and a few days later scarcely a sign of the mark can be seen.

Pental as an Anæsthetic.—In the Therapeutische Monatshefte, 1891, p. 509, Prof. Holländer gives an interesting historical sketch of pental (trimethylæthyl, also called β-isoamyl, C_5H_{10}). Soluble in alcohol, chloroform, or ether; insoluble in water; extremely volatile. Narcosis is readily obtained. Patients readily open their mouth on command, even during deep narcosis. No after-symptoms, except slight headache, possibly nausea or vomiting. It appears to be absolutely safe.

Jaborandi for Urticaria and Gonorrhœal Rheumatism.—Dr. Heaton, of Aurora, Ind., in the Lancet-Clinic, recommends this remedy in half-teaspoonful doses of the fluid extract every half hour until four doses have been taken or free perspiration or salivation is induced. Repeat in twenty-four hours, if necessary. Best taken in the evening and care should be taken for thirty-six hours thereafter against taking cold. For gonorrhœal rheumatism it should be taken in the beginning of the attack.

A New Remedy for Rheumatism.—At a recent meeting of the Berlin Medical Society, Dr. Paul Guttman recommended a new medicament called Salophen. It is a finely crystalline substance, easily soluble in ether and in alcohol, but not soluble in water. It consists of salicylic acid and acetyl-paramidophenol in almost equal parts. Six to eight grammes can be given daily without injury to the patient. It has a slight anti-febrile effect.—*The Lancet.*

Acute Cystitis.—Dr. Marsh (Therapeutic Gazette) strongly recommends the use of the following formula, requiring that distilled or rain water be used in its preparation to prevent the formation of oxalate of lime. The relief from pain is prompt and the result exceedingly satisfactory:

℞ Acid oxalic, gr. xvj.
Syr. aurantii cor., ℥ j
Aquæ pluv. q. s., ℥ iv.

Sig. Teaspoonful every four hours.

Charta Antasthmatica.—

℞ Potassium nitrate, 17 parts.
Extract of stramonium (inspissated), 10 parts.
Sugar, 20 parts.
Water, hot, 100 parts.

Dissolve the solids in hot water, strain the solution, impregnate white filtering paper with it, and dry it.

Celery for Rheumatism and Gout.—On the theory that rheumatism and gout are due to accumulation of uric acid in the blood, and that the effect of eating celery is to neutralize acidity, celery in cooked form is commended. It may be boiled till soft, milk, flour, butter, and condiments added, and used as a sauce for potatoes, or poultry.—*Hot Springs Medical Journal.*

"*Jim-Jams.*"—

℞ Chloral hydrat., ℥ iss.
Potass. bromide, ℥ ij.
Spts. ether comp., ℥ ij.
Tinct. valerian, ℥ iij.
Aquæ, ℥ vj.

M. Sig.—Teaspoonful every two, three or four hours till quiet.

—*American Medical Journal.*

Pichi in Indigestion.—This drug is in my hands proving very useful in chronic indigestion. The indigestion causes either constipation or periodical diarrhœa, accompanied with a "fickle" appetite. Ten drops of fluid extract two or three times a day.—*Medical Free Press.*

Medical Progress.

Spartein, a Cardiac Medicament Par Excellence.—The special, or we may say specific action of spartein is to excite the heart in an energetic manner, and to regulate its pulsations. This regulation consists in accelerating or slowing the beats, according to whether the latter are more or less rapid than normal. The heart beats return to their normal condition in force, number, and regularity. A striking proof of this action may be seen in a frog placed under the influence of spartein and then killed. The heart is still found beating on the third day after death. This fact should be conclusive, as regards the energetic action of this drug.

Another advantage of spartein is its rapidity of action. Ten minutes, or twenty minutes, at most, suffice for the manifestation of its action, which, once produced, lasts for many days, even if the medicament is discontinued.

There are no contra-indications to the use of spartein. Sometimes patients with disordered cardiac innervation show some susceptibility to its action, and in them we must feel our way, commencing with small doses (0.04 to 0.05), while with all other cases the dose is from 0.10 to 0.25 centigrammes.

In a conscientious study of spartein, Pawinski, of Warsaw, seeks to determine the most favorable doses to excite the tonicity of the heart and regulate it. In his hands small doses—one to two centigrammes at a time—repeated four to eight times daily, gave the best results. Doses of six to eight centigrammes, also given four to eight times, seem too large. He thinks one of the most valuable actions of the drug is its sedative action on the nervous system of heart cases. He noticed that it acts particularly well in cardiac disease complicated with nervous troubles (hysteria and neurasthenia). Consequently he administered it with great success in functional cardiac affections, such as palpitation, precordial pain, the anginas of anæmia, hysteria, neurasthenia, nicotinism, alcoholism, the morphine habit, and that from severe mental or physical strain.

According to Prof. Germain Sée, the tonic action of spartein on the heart and the blood pressure are beyond doubt and incontestable. In France alone, while its physiological action and therapeutical application have been demonstrated by Laborde, Germain Sée, and Houdé, the knowledge of its action is still obscure, and its use almost unknown. Of late, however, owing to the important communication of Prof. Sée, it is emerging from this obscurity, and instances where it has been used with the best results are increasing and conclusive.

In Vienna Hans Voigt arrives at nearly the same conclusions as M. Sée, while the doses he used were generally smaller. The Viennese physician, like Prof. Sée, concludes that spartein increases the cardiac tonicity, re-establishes the rhythm, and acts very rapidly. He sees indications for its use in valvular lesions with or without asystolic phenomena, in all insufficiencies of the myocardium, and in pericarditis.

The rapid action of spartein, while indicated in all cardiopathies, is of especial benefit where immediate effects are desired; for example, in asystolia. Moreover, all conditions of general enfeeblement of the organism due to cardiac asthma are amenable to spartein, whether associated or not with lesions of the myocardium or valves; the increased circulation of the blood favoring regeneration of the vital forces. In cardiac dyspnœas, he recommends combining it with iodide of potash and inhalations of pyridine.

M. Prior states that this drug gives good results in all forms of cardiac troubles, but he has had the most satisfactory results in valvular lesions after "compensation rupture" has occurred. The different action obtained by Prior from those of other clinicians is no doubt due to the difference in doses. Those employed by this author strike us as being too large, and exceed considerably the physiological and therapeutic dose, even approaching toxicity (one gramme daily). Nevertheless he claims spartein should be given in all cardiac affections where digitalis is ineffectual or cannot be prescribed, in cases where we wish to relieve and regulate the heart's action as quickly as possible, in stheno-cardiac attacks.

Dr. Clark, of Bristol, has published a clinical study of the therapeutic action of spartein. He observes that it acts within thirty minutes after administration, augments the force of the pulsations, and thus *slows the pulse* in cases where it is abnormally frequent. When there is pre-cordial pain, dyspnœa, irregular action of the heart, these painful phenomena cease, and the patient experiences a very marked and pleasant sensation of warmth.

Dr. Legris cites many observations in the cardiac hypertrophy of adolescence where spartein, either alone or associated with iodide of potash, caused a rapid disappearance of all the manifestations of this pathological state, almost unknown until within a few years.

Maslowsky, who used this drug in three

cases of cardiac affections prior to compensation, concludes from his observations that, first, spartein acts rapidly; second, it stimulates the activity of the heart, increases the volume of the pulse, and lessens its frequency; third, it regulates the rhythm of the heart beats; fourth, it has no cumulative action, and causes no untoward symptoms.

In conclusion, it may be stated that all authors who have witnessed the therapeutic effects of spartein agree in according the following results to it:

1. Rapidity of action.
2. Augmented tonicity of the cardiac muscle.
3. Regulation of the pulsations.
4. Return of the pulsations to the normal type.
5. No cumulative effects.
6. No positive contra-indication to its use. In disorders of cardiac innervation only is it necessary to moderate the dose.

These conclusions show in what class of cases its employment is necessary, viz.: In all where we wish to obtain the first four of the above results. In all cases where the heart muscle is flabby from either alterations of its tissue, insufficient compensation, or cardio-vascular asthma. In all likewise where the pulse is irregular; in cases of cardiac asthma; valvular lesions, aortic or mitral; stenosis or insufficiency; in pericarditis, cardiac dyspnœa, the hypertrophy of adolescence, etc.—*Revue Therapeutique des Alcaloides.*

Treatment of Chronic Ringworm.—Prof. Louis A. Duhring, M.D., in a paper reporting his experience in the treatment of chronic ringworm in an institution, alludes to the value of chrysarobin. He says:

The most active and potent parasiticide employed was chrysarobin. At one time or another it was in use upon the greater number of the patients, and as it can be spoken of in terms of praise, a short account of it may be given, especially as my experience with it has been different in certain particulars from that of some other observers. It was prescribed in twenty-nine cases. In seven more or less irritation of the scalp occurred, while in twenty-two there was none. By irritation is meant sufficient local disturbance to demand the temporary suspension of the drug. The strength varied from fifteen grains to two drachms to the ounce of ointment—the weaker ointment, however, having been seldom employed. The strength in common use was one drachm to the ounce. Some of the patients, it is unnecessary to state, tolerated a much stronger ointment than others; thus, in one case, nine applications of a two drachm to the ounce ointment were made without causing swelling or inflammation of either the scalp or face. In another instance ten applications of the same ointment gave rise to no inflammation of the eyes. Several cases were recorded in which the eyes escaped, even though other parts of the face were slightly inflamed and stained. In one instance only did œdema of the whole face occur, and this after the fifth day. In one patient an ointment of one drachm to the ounce was applied to the whole scalp without giving rise to undue inflammation. These cases are alluded to for the purpose of showing how well borne was the drug in most cases. There was no reason to doubt that it was of good quality. Unpleasant burning sensations and heat were noted in only a few instances. On one occasion pain in the head was complained of, although the scalp did not look painful or even sore, while in some cases the whole scalp became apparently inflamed without giving rise to either heat or pain. In some cases, too, the forehead and sides of the face were stained without involving the eyes. In only one case did the glands of the neck become markedly engorged. The inflammation of the scalp passed off in the form of desquamation of a peculiar character, consisting of large, papery masses of scale. When the ointment used was strong, the scale would come away in large and thick patches. From my experience with the drug in these cases—which, be it remembered, were all chronic and had long been subjected to strong remedies of one kind or another—there would seem to be not much danger from its employment if applied *under the supervision of the physician*, and if due care be exercised in avoiding the face, in making the applications sparingly, and in gradually increasing the strength. It is a remedy always to be handled with caution. It is remarkable that so little cutaneous disturbance and so few complications were noted. It proved the most valuable parasiticide in the list. In the form of ointment it possessed power to penetrate the follicles and to destroy the life of the fungus, and in this latter power lies its great worth. It may be mentioned that in no instance was chrysarobin used in combination with other remedies; therefore, such results as were obtained may be attributed directly to it.

In conclusion, I would say that it should invariably be applied in the smallest possible quantity and be well rubbed in with a bit of cloth or a mop. Used with caution, the

staining of the skin of both patient and nurse may be reduced to a minimum.

In the class of cases of ringworm under consideration, all treatment at best is slow, but I have no hesitation in giving the preference to chrysarobin. It is the most potent remedy at our command, and the observations and experience here recorded demonstrate that it is not only a valuable but a comparatively safe remedy, and that with due precaution and care it may be applied to the scalp, under the supervision of the physician.—*Amer. Jour. of Medical Sciences.*

Effects of Iodine on Enlarged Prostate.—The prostate is a complex gland, formed during the third month of fœtal life, and gradually increasing until after puberty, when it attains its full integrity. It then remains "*in statu quo*" until a man reaches fifty or fifty-five years of age, when it frequently becomes more or less of a nuisance. It is largely composed of involuntary circular muscular fibres; but there is also much true glandular structure imbedded in the substance. Both these components are prone to overgrowth, the fibrous and muscular tissues becoming hypertrophied, just as occurs in fibroid tumors of the uterus. If the fibroid tissues are more enlarged than the muscular, examination per rectum will reveal a hard, swollen, nodular prostate, which will prove very rebellious to treatment; if the muscular tissue predominates, the gland will be swollen, but soft, and more amenable to absorption. When the *lower part* of the prostate is hypertrophied, its lateral lobes bulge into the rectum, flatten the fæcal mass, and impede its expulsion. The patient often mistakes this for constipation. When the *upper part* is enlarged, the lobes impinge on the prostatic urethra, narrowing its channel and obstructing the flow, or else, if the upper central part, lying between the ejaculatory ducts, is affected, it partially blocks the entrance to the bladder, thns further hindering micturition. This condition is also misleading, and may pass for stricture, whereas no stricture, properly so called, can ever exist in this situation. In *general* enlargement of the gland, these troubles annoy the patient "fore and aft."

The influence of iodine in glandular swellings is almost proverbial. It has been credited with the power of diminishing the size of healthy glands, as the mammæ and testes; but this is very doubtful, except such diminution of volume as naturally attends decreased secretion, which iodine often produces. But in disease it seems to assist in the breaking down and absorption of precocious tissues. Strumous glands, enlarged tonsils, parotid and bronchial glands, bubo, bronchocele, epididymitis, in fact most glandular hypertrophies, improve under iodine, and there are analogous reasons for expecting that it would be remedial in the earlier stages of enlarged prostate. The writer has seen cases of impeded micturition, distinctly referable to the prostate, improve under its influence, and rectal examination has convinced him of diminution in the swelling. Surgical interference has not, up to now, accomplished much, excepting, of course, the necessary but temporary relief afforded by the catheter; and we are justified in seeking and searching all methods, old or new, that are likely to prove of even the smallest service. Iodides, while helping other glandular swellings, have no tangible effect in this. Quinine, salicylates, and ergot have been used, but found wanting. But iodine has some claims for further trial. The *liquor iodi comp.* is a convenient form for its administration. Ten minims in a wineglassful of water may be given three times a day (unless it produce iodism), and an iodine paint (one drachm to an ounce of almond oil), applied to the perineum, is a useful adjunct. Tincture of iodine may be used in the same dose, but it is apt to derange the stomach. Many articles of food contain an abundance of iodine, such as beans, watercress, oysters, and potatoes; these form a good supplementary diet, as also, when obtainable, those mineral waters that favor iodine, such as Kreutznach and Woodhall Spas. They have an undoubted influence in promoting the absorption of uterine fibroids, which closely resemble prostatic hypertrophy, thus further suggesting the use of iodine in the latter disease.—L. Lewis, M.D., in *Medical World*, February, 1892.

Operations for Vesical Calculus.—By means of the vesical sound, now in common use, stone, if present in the bladder, will very rarely escape detection. It is presumed that no one at the present time would attempt to dissolve a calculus by medication. A case having presented itself, therefore, the question of the choice of operations at once arises. The prevailing practice has naturally varied from time to time, now one operation and now another being in popular favor. At the present time lithotomy, lithotrity, and litholapaxy, each has its advocates. The champions of lithotomy are again divided between the perineal and suprapubic methods.

The fact is that no one operation is suit-

able for all cases, and that one must be selected which promises to best fulfil its object with the least risk to the patient. Lateral lithotomy, performed by a skilful operator, is a safe and rapid means of extracting small or medium-sized calculi. This method was formerly invariably employed in cases of aggravated cystitis, or when impassable stricture of the urethra was present, and in all cases of stone occurring in children. The newer operation of suprapubic lithotomy is gaining rapidly in general favor, and promises to largely, if not entirely, supplant the perineal incision. There seems to be no advantage offered by the latter method which is not equally possessed by the former, while, to pass over the question of skill required, the high operation has the additional arguments of enabling a large stone to be delivered, of permitting thorough exploration of the bladder, and of affording opportunity for dealing with an enlarged lobe of the prostate, should this be found to be present. This operation is equally applicable to children.

Lithotrity should certainly be but rarely performed, that is as formerly employed. Lithotrity at a single sitting, as introduced by Bigelow and called by him litholapaxy, is, however, beyond question, the operation most generally applicable for stone in the bladder. The cases unsuited for this method are those presenting undilatable strictures, a high degree of cystitis, and those in which the stone is too large to be caught by the instrument or too hard to be crushed. These in the aggregate represent but a small proportion of those presenting themselves for treatment. True, this operation will give the best results when performed by those who have attained skill and rapidity by large practice, but the advantages are many and weighty. Perhaps most important of all is the low mortality. Sir Henry Thompson, in a series of three hundred and twenty-five litholapaxies, had a mortality of but a fraction over three and one-half per cent.

This is really very small, when it is remembered that many of these patients, when first seen, are in advanced years, with alkaline urine and serious changes in the bladder-walls, and with their vitality well-nigh exhausted by a long period of suffering. With the improved instruments now made, little difficulty is experienced in crushing the stone and thoroughly washing out the fragments. The almost entire absence of violence to the tissues and the rapid convalescence after operation make this so much more desirable than a cutting operation, which confines the patient to bed for some weeks, and there is always the possibility of a permanent fistula remaining. Litholapaxy is equally to be advised in children.

As already stated, Bigelow's operation cannot be applied to every case of vesical calculus; but in those cases in which it is applicable, no other method can compare with it in any valuable point.—*University Medical Magazine.*

Palpitation of the Heart.—The term palpitation is sometimes broadly applied to designate increased force or frequency or perverted rhythm of the action of the heart. It were preferable, however, to restrict the application of the term to the designation of the *subjective* sensation of deranged cardiac action, independently of the character or the cause of the derangement. The action of the heart, as determined by physical examination, may be gravely disturbed, and yet the patient not have the slightest intimation of any abnormality. Here the use of the term palpitation would be manifestly inappropriate. Under ordinary conditions, in health, the individual is totally unconscious of the pulsation of the heart. There may be increased frequency of action both in health (during digestion) and in disease (in febrile conditions), and the patient still be unaware of such pulsation. This surely would not be called palpitation. On the other hand, the individual, under certain conditions, may be alarmed by his sensations when, on auscultation, one is unable to detect any abnormality of cardiac action. This would constitute the simplest type of palpitation. It cannot be denied, however, that in many cases in which abnormal sensations are referred to the heart the action of the organ is deranged. The point that we wish to make is, that palpitation essentially consists in the *sensation*, and not in the physical phenomenon, which is but incidental.

The significance of palpitation, employing the term in the limited sense indicated, is a widely variable one. Of itself the manifestation affords but little aid in prognosis; it is of no diagnostic significance whatever, except it be by directing attention to the heart; it gives no indication for treatment that is not more unequivocally given by other symptoms. The smallest number of those that complain of palpitation have disease of the heart; the largest number are dyspeptics; while the intensity of suffering that may be induced in a hypochondriac is sufficient to give rise to a condition of pseudo-angina. In these, of course, the most brilliant results are to be obtained by careful attention to the secretions, to the digestion, to the food,

and to the mode of life. Even in cases of organic disease of the heart, a distressing symptom may be relieved by the removal of mechanical conditions dependent upon abdominal distension and gastric dilatation, or of irritating influences acting upon the peripheral terminations of the pneumo-gastric nerve. Among other common causes of palpitation of the heart, other than organic disease, are the excessive use of tobacco, of tea, of coffee, of alcohol, of certain drugs, hunger, loss of sleep, fatigue, exhaustion, sexual excesses, hysteria, and great muscular effort. The manifestation disappears with the removal of its cause.—*Medical News*, January 2d, 1892.

THERAPEUTICS OF GOLD.—The best recent writers agree with the old authorities that gold will cure old cases of syphilis where repeated courses of mercury and potass. iodid. have failed. For instance, it is the best remedy in recurring ulcerations of the throat, syphilitic ozæna, diseases of bones, and syphilitic phthisis. At present gold is principally used for various neuroses, impotence, etc. Niemeyer used it much in hysteria, and Nöggerath says it quickly cures chronic ovaritis, if uncomplicated. Gold salts, if pushed, produce salivation, which, however, can always be distinguished from that due to mercury by not affecting the teeth, cheeks, or gums. They seem to produce a more active cerebral circulation. At all events, the effect of gold salts on the brain is remarkable. The intellect becomes much more active, great cheerfulness, or even mental excitement, like mild alcoholic intoxication, results. Gold salts are said to be aphrodisiac. Gold is eliminated by the liver, intestine, and kidneys. The urine becomes golden in hue—a peculiar bright yellow. Prolonged use gives rise to "auric fever," marked by profuse sweats, great increase of urine and saliva. The chloride of gold and sodium ($AuCl_3$ $4NaCl$) is the favorite salt at present, dose from $\frac{1}{30}$ to $\frac{1}{12}$ of a grain, usually in a pill, but it is soluble 1 in 2 of water. Nervous dyspepsia is greatly relieved by $\frac{1}{20}$ grain *ter in die*. Epigrastic pain, red, glazed tongue, and diarrhœa after meals are the indications for the drug. Catarrh of duodenum and bile ducts, and the resulting jaundice, are usually removed by the same dose. Amenorrhœa from torpor of ovaries and chronic metritis, with scanty menses, are often removed by gold, when all the usual drugs have failed. The sterility due to such causes, or due to coldness, is often cured by gold when everything has failed (Bartholow). It stops the tendency to habitual abortion better than anything else, probably by its active antisyphilitic powers. Bartholow particularly recommends a fair trial of gold, in small doses, for chronic Bright's disease, the glanular or fibroid kidney, and the so-called "depurative disease." He has seen wonderful improvement. As to nervous disorders, melancholia, hypochondria, and all such states attended with nervous depression, find their best drug-treatment in gold. The vertigo of old people from atheromatous vessels, and the vertigo of all ages due to indigestion, are much benefited; but where cerebral hyperæmia or any increase in intracranial blood pressure exists, gold does harm. I have never heard of gold being recommended for insomnia, but, as this is often due to cerebral anæmia, no doubt it would benefit such cases.—Dr. John Strahan, Belfast, in *British Medical Journal.*

WASHING OF THE STOMACH IN INFANTILE DIARRHŒA.—An infant three months old, and nursed by a drunkard, was lately brought to the hospital for contracture which presented all the characters described by Trousseau, but the interesting point was the form of the diarrhœa present and the means taken to combat it; diarrhœa is, besides, a habitual cause of tetany. The diarrhœa was abundant, green, and attended by so much cold and such a state of collapse that the death of the child some days after its admission appeared certain. Cow's milk was so badly tolerated that it was replaced by albumin water with a little alcohol. This gave good results, but washing out of the stomach and rectum was also employed. Amelioration was immediate and continued. To the other treatment were also added baths of warm wine, a very good excitant of the skin in these cases. The good effect of the washing is shown in the fact that the diarrhœa reappeared as soon as it was stopped. When we attempted to give asses' milk in small quantities, in spite of all precautions, the diarrhœa, convulsions, etc., recommenced. The washing treatment was then resumed, and, after some days, milk could be tolerated mixed with seltzer water.

This case is of great interest as the tetany, as well as the other symptoms, indicated intestinal intoxication. After the first alteration of the digestive function, the infant was unable to support any lacteal alimentation, but was able to support for a sufficiently long time the albumin water and brandy.

Sometimes lactic acid gives good results in these cases, but it must be given continu-

ously—every ten minutes—so that the digestive tube will always contain a certain quantity. A solution can be made containing one part of the acid to fifty of syrup.

The washings of the stomach were made with a soft tube of about three-eighths of an inch in diameter, and with boric acid water. They were continued until the water returned clear. Not only diarrhœa, but vomiting yields readily to this measure.—Dr. Paul Championnière, in *Jour. de Méd.*

Creasote in Diphtheria.—In 1888 M. Legroux recommended, and in forty-four cases employed, creasote as an internal remedy in diphtheria in children. He selected the drug on the ground that it was, in therapeutic doses, innocuous, antiseptic, and exercised a beneficial local action on the mucous membrane of the respiratory tract. He found that bronchitic symptoms were quickly and distinctly ameliorated by its use. In forty-four tracheotomies he had fourteen recoveries. His *interne*, M. Soupault, has recently employed this method of treatment in selected cases with good results. M. Soupault (Rev. des Mal. de l'Enfance, September, 1891) starts with the propositions that death after tracheotomy is in most cases due to broncho-pneumonia, and that the cases may be divided into three classes: 1, Those in which the broncho-pneumonia has been developed before tracheotomy is performed. 2, Those in which there is already pseudo-membranous bronchitis, and broncho-pneumonia is imminent. 3. Those in which the diphtherial process has not extended below the glottis. M. Soupault hoped that in the third and perhaps the second class of cases the development of broncho-pneumonia might be prevented by the administration of creasote, which, being eliminated by the lungs, might exert a local influence tending to a condition of asepsis or antisepsis unfavorable to the development of the microbes which are the determining causes of the pneumonic complication. He used a mixture in which 10. grammes of pure creasote were dissolved in 500. grammes of glycerine and 100. grammes of rum; each tablespoonful of this mixture contains 30. centigrammes (4½ grains) of creasote. He found that young children could take two tablespoonfuls, and children of four years twice that quantity. As a rule, he also placed a piece of cotton wool soaked in the following solution over the mouth of the tracheotomy tube: Creasote, 1 part; alcohol, 10 parts; glycerin, 20 parts. Forty-five cases of tracheotomy were thus treated with twenty-one recoveries, or forty-six per cent. —*British Medical Journal.*

Dysmenorrhœa and its Treatment.—E. L. H. McGinnis (New York Journal of Gynæcology and Obstetrics, January, 1892) says that dysmenorrhœa is the result of one of the following conditions:

1. Chlorotic or highly nervous temperaments (which are often closely associated).
2. An unhealthy uterus.
3. Inflamed ovaries.

Although not regarding electricity as a cure-all, the author states that the treatment, by this agent, of dysmenorrhœa, due to inflammatory conditions of the uterus or ovaries, has yielded, in his hand, results far greater than were ever obtained by the use of tincture of iodine, carbolic acid, etc. The method of applying electricity is similar to the practice of Apostoli: After douching the vagina with an antiseptic solution, the intra-uterine electrode is introduced into the cavity of the uterus and passed up to the fundus. The positive cord is attached to this electrode, and the negative cord to the clay pad which is placed on the abdomen over the region of the uterus. The current is turned on very gradually in order to prevent any shock, the strength of the current not exceeding 30 milliamperes, and the seance lasting from three to five minutes. When the dysmenorrhœa arises from ovaritis, the treatment is begun a week before the expected time of menstruation and given daily for about eight minutes. The current is from a faradic battery, and is employed as strong as can be borne without much pain. A flat, pliable electrode is placed over the inflamed ovary, and a similar one beneath the lumbar region as the patient lies on her back. After a few applications, the patient will usually be able to tolerate a ball-electrode, connected with the positive pole, placed against the ovary (the negative being on the abdomen), and a current of tension used three times a week. It is scarcely necessary to state that when dysmenorrhœa results from a chlorotic or nervous condition, the treatment by electricity is of secondary importance. The correction of flexions and the wearing of pessaries will also accomplish much for the relief of painful menstruation. Operative interference is required in certain cases—as in stenosis of the canal, polypi, vaginal stenosis or occlusion, imperforate hymen, and certain diseased states of the ovaries. The author asks for a trial of his method of treating ovarian dysmenorrhœa before consigning a patient so afflicted to the operating-table.

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Original Articles.

TREATMENT OF THE MORPHINE HABIT.

BY E. P. HURD, M.D.

The following case, admitted to the Anna Jaques Hospital, Newburyport, Mass., November 30, 1891, was successfully treated by Erlenmeyer's rapid-withdrawal method. This method is so well described in the little treatise in the Leisure Library entitled "Treatment of the Morphine Habit" (series 1889, G. S. Davis, publisher), that I need only refer the readers of the MEDICAL AGE to Chapter I, p. 13, of the book, and to the concluding chapter, for the full exposition.

November 20, 1891, I received a letter from Mrs. D. B., of F—, Mass., stating the miserable condition into which she had been brought by the long continuance of the morphine habit. She stated that she was a nurse, aged 41 years, for fourteen years successfully employed in caring for the sick in private families, but during the last twelve years a victim of the vice above mentioned. She had always taken the morphine by mouth, never hypodermatically. The quantity had long averaged fifteen grains a day; of late, however, she had reduced the quantity to rather less than seven grains a day. She had tried to reduce it to four grains. She had been suffering from many of the symptoms peculiar to morphinism—nervousness, insomnia, loss of appetite, with constipation and frequently urinating, and a most complete prostration when the effect of the stimulus had worn off. Mrs. B. had read the little treatise above mentioned; she was anxious to obtain admission to Newburyport Hospital and be treated according to Erlenmeyer's method.

I replied, offering Mrs. B. a room in our hospital on moderate terms, and advising her to come early in December, as I was to be on duty during that month. Only, she should understand that no great amount of restraint would be put upon her. She must come *on her honor*. Our hospital was not an institute for morphio-maniacs. If she should choose to practice fraud, she might have opportunities so to do. We should not search her person for morphine, or incarcerate her. But if she were in earnest to get well, we would do our utmost to help her. The offer was accepted, with the assurance from the lady that she was determined to break off the terrible habit or die in the attempt.

On November 30th she was admitted to the hospital—a well nourished woman, with frank, honest, prepossessing countenance, not yet mentally shattered, more than ordinarily vivacious and bright. On entering, she gave Miss McDonald, the head nurse, all the morphine in her possession. November 30th the last full dose of morphine was allowed her—7 grains, and December 1st she took to her bed, and kept it thereafter for a fortnight. She requested Miss McDonald to take charge of her clothes so that it might not be in her power when the craving for morphine was on her to get up and go out to procure it.

Dec. 1st: The daily dose was reduced by one-half (2½ grains); whisky, four ounces during the day and night; beef broths, milk, egg-nog for nourishment. The following prescription was ordered:

℞ Tinct. valerian,
Spts. ammon. arom,
Spts. lavend. co., } ää ℥ j.

M. Sig.—A teaspoonful every two hours in water.

At night, sulphonal, 20 grains in hot water *hora somni;* the same dose to be repeated at midnight.

Dec. 2d: Patient has had a fairly good night; slept six hours under the sulphonal; is a little tremulous, and feels weak and depressed; has nausea and diarrhœa; begs for her full dose of morphine. This I of course

refused, but injected one and one-half grains. Ordered *Mistura Cretæ co.* with catechu and a few drops deodorized laudanum for the diarrhœa; whisky, 6 ounces in divided doses (a tablespoonful every two hours). Stopped valerian mixture, and ordered ten-grain doses bromide every two hours in elixir calisaya; sulphonal at night as indicated.

Dec. 3d: Patient was so utterly demoralized this morning, moaning and beseeching, and at times even screaming, that I gave her three grains of morphine by mouth, which in half an hour brought elysium to her. The vomiting and diarrhœa had been troublesome; sulphonal, whisky, nourishment, had all been vomited.

Evening: Mrs. B. entreated me to reduce her allowance to one-half grain on the morning of Dec. 4th. Asked for one full dose of 30 grains sulphonal in two ounces whisky, which I granted.

Dec. 4th: Mrs. B. was in such a dilapidated condition that I gave her, by mouth, 2 grains sulphate morphia. The diarrhœa and vomiting still continued, but with lessened frequency and severity.

Dec. 5th: Much nervousness and prostration, but symptoms on the whole improved. Diarrhœa and vomiting have ceased; one grain morphine by mouth. The bromide mixture, not being well borne, was discontinued. Daily allowance of whisky was increased to 8 ounces, and a small bottle of Bass' pale ale was allowed in addition. A pill of hyoscine hydrobromate ($\frac{1}{100}$ grain) was given at bed-time, and sulphonal in twenty-grain doses at midnight and at 2 o'clock A. M.

Dec. 6th: The morphine was reduced to half a grain by mouth, with the understanding (to which the patient assented) *that this should be the last dose which should be given.* The allowance of whisky was increased to one ounce every two hours (if needed). As the previous night had been nearly sleepless in spite of the sulphonal, it was agreed that chloral should be given the coming night in suitable doses to cause sleep.

Evening visit: Found Mrs. B. nearly frantic; it was "an indefinable distress all over." She clung to my hand and begged most beseechingly for a little morphine. I felt compelled pitilessly to refuse. "Are *you* going to conquer," I asked, "or the *demon?*" I urged her to summon all her will-power, *or she would be lost.* Twenty grains of chloral, with one drachm of ammoniated tincture of valerian and $\frac{1}{100}$ grain hyoscine hydrobromate, were given, and the nurse was directed to repeat the dose without the hyoscine in two hours if the patient were not relieved.

Dec. 7th: Patient had slept much of the time the previous night, but this morning was almost ungovernable; was, however, too weak to make any effectual resistance; did little but lament, and beg for stimulants; had consumed a pint of whisky the last twenty-four hours. Some very marked hysterical manifestations. When I arrived she again implored for morphine, and again I demanded whether *she* were going to conquer or the *demon.* This was the critical time for which we had been looking; if she passed this crisis triumphantly she would begin to recover her old vigor and energy and rapidly to recuperate.

It seemed best to reduce the quantity of whisky which had been heretofore given, and to give instead more nourishment. Milk was now well borne. Of this a cupful—now hot, with Jamaica ginger; now cold, with ice and a little brandy; now containing bovinine, now peptonoids—was to be administered every two hours; for the nervous depression, infusion valerian, four ounces at a time; and sulphonal at night to produce sleep. Mrs. B. herself asked to have the chloral discontinued, and to be allowed to return to sulphonal, as the chloral of the previous night had seemed to excite rather than quiet.

From this date there was no serious trouble. No morphine was given after the 6th; thus by the "rapid method" the withdrawal was effected in less than a week. After the 10th the sulphonal was discontinued, as Mrs. B. was desirous of becoming as rapidly as possible emancipated from all drugs. The quantity of whisky was reduced from sixteen ounces (the amount given on the 6th, to four ounces on the 7th, 8th, and 9th, and on the 10th it was discontinued altogether. The infusion of valerian proved to be of great assistance, and for several days over a pint a day was taken. The appetite rapidly returned after the 8th. At the end of a fortnight Mrs. B. was able to be

dressed and to sit up. The kindness and devoted attention of our hospital nurses were elements which much conduced to the rapid and complete recovery of the patient, who was powerfully encouraged in her attempts at self-mastery.

Mrs. B. left the hospital about Dec. 20th. Jan. 26th I received a long letter, from which I quote the following extract:

In imagination I have heard you say many times: "I think Mrs. B. must have *gone back*, or I should have heard from her." *No, I have not*, but I must tell you that it has taken all this time for me to become, so to speak, acquainted with myself, and I can scarcely realize yet that it is true; it seems as though it must have been a dream. I feel so much better than I ever expected to feel, that I am in perpetual amazement at myself. It is only about a month since I left your care and came home, and I do not believe that you would know me for the same person. I have an enormous appetite, a perfect digestion, and sleep all night long without sulphonal, chloral, or whisky. The sky never was so clear, the sun so bright, or life so sweet as now. I am in the best of spirits, and have nothing to complain of with the exception of a little *nervous*—or perhaps, to be more exact, an uneasy and restless—feeling, as though I had lost something. * * * I cannot say that I have been wholly without temptation, but this is growing less and less, and the only reason I have for not writing earlier to you is that I did not want to write till I felt sure of myself; and I can honestly and truly say to-day that I do feel sure, and I do not think that any circumstances whatever could ever induce me to touch the accursed drug again.

It is not often that the physician has a patient so *tractable* as was Mrs. B. When they come to us for treatment, these morphine habitués are more or less demoralized; they are physical, mental, and moral wrecks. Such was the case with S. H., of Rowley, who was for a short time under my care in the Anna Jaques Hospital in the summer of 1890. This patient (a painter, aged 40) professed an earnest desire to be cured, and (when well under morphine) promised to submit to any requirement. There is no time when the victim of morphine vice is so full of good resolutions as when he is stuffed with morphine. I admitted him to the hospital and required him to take to his bed. I began the withdrawal treatment, he pledging himself to take no morphine except what I gave him. The next day he was up and dressed and out, despite all the nurses could do, and came back full of morphine, but declaring that he had had none. Having had proof that he had been to Dr. H. and Dr. M. for hypodermatic injections, I discharged him forthwith.

He was afterwards readmitted under Dr. Montgomery, but he managed to smuggle into the hospital a vial of morphine pills, to which he secretly resorted, and after a few days of this fooling the deception was found out and he was again discharged.

Another patient, G. W., actually fooled me for a fortnight, pretending that he was rigidly carrying out my directions, when he was daily taking full doses of morphine (ten to fifteen grains) with cocaine, *bought for him and administered by his wife!* This woman professed the utmost desire for her husband's restoration, and yet was unable to resist his importunity for morphine, and constantly pandered to that appetite. G. W. has lately been removed to a private asylum in Brooklyn, N. Y., where he has been put under restraint. I understand that the efforts of the superintendent and his assistants to reform the young man were for some time threatened by this woman, who was allowed at stated times to visit him because she was his wife. She was at last detected in giving him morphine, and since then she has not been permitted to enter the institute.

I am more than ever persuaded that, as a general rule, the condition for successful treatment of a morphinist is confinement in an asylum or institute where the patient is virtually a prisoner. It is seldom that in private or hospital practice we can do much for these patients, for the very reason that when they apply to us for treatment their will power is gone, and if "the spirit" is indeed willing, "the flesh" is too weak.

Newburyport Hospital, Mass.

ARTICLES OF THE NARCOTIC HABIT AND LEGISLATION.*

BY DR. L. LEWIN.

Ages have elapsed since alcohol began its triumphal march through the world, and in less than a century hence the whole of what now constitutes uncivilized humanity will

*Translated from the Berliner Klin. Wochenschrift, by Joseph Helfman, Detroit.

have adopted it in the form which is regarded as the most baneful of all, namely, that of bad whisky or brandy. In many regions the latter is forced to contend with long familiar and impure alcoholic beverages obtained by the most primitive processes. But even the potency of custom, of endeared habit, cannot prevent the progress of "fire-water." All those beverages will disappear, which are still produced, especially on the American Continent between 50° south and 30° north latitude, from the most various fermentable materials, such as cane sugar, Indian corn, American aloe (*Agave Americana*), and *Manihot utilissima*. In precisely this province of industry empiricism has achieved its greatest triumphs amongst the least civilized races. The conversion of starch into sugar, and of sugar into alcohol and carbonic acid, has there been hit upon unconsciously. Perhaps thousands of years before physiology was enabled to explain with exactness the property of the saliva to transform starch into sugar, many South American tribes performed this experiment, whenever they felt the desire to drink, by chewing the mandioca bread and by permitting the expectorated mouthfuls to ferment after addition of water. And not alone does the American Continent reveal such a primitive method for producing alcoholic beverages. The palm-wines obtained from *Attalea speciosa*, *Cocos nucifera*, *Mauritia flexuosa*, *Elate silvestris*, *Borassus*, and other palms; the banana-wines; the beverages obtained from the Marva-millet and generally used in Sikkim and Nepaul (India); the preparations from Durrha, rice, honey, plums, milk and many other alcohol-yielding substances, indicate that everywhere on the inhabited globe, where alcohol has been permitted to reveal its action on the brain, it has become in every form a welcome guest. But experience teaches also that in the forms of its European manufacture it is preferred by tropical races to their national beverages, for its effects are imparted by smaller doses, and persist longer, owing to its higher concentration. Hence many other less intoxicating, non-alcoholic, and far less toxic substances, such as kawa, for example, have been very largely forced to give way to alcohol.

I have before dwelt upon the causes which prompt men to resort to the baneful use of narcotics. Amongst all nations there is this peculiar, generally innate, but also acquired longing. As far as historical tradition reaches back it has been known.

"Give strong drink unto him that is ready to perish, and wine unto those that be of heavy hearts. Let him drink, and forget his poverty, and remember his misery no more." These words of Solomon express some of the more powerful motives for the use of such substances. To produce a joyous mood and thus to sweeten or forget events, passions, or aught which may oppress the soul—to transport oneself into a state of partial or complete oblivion, in which the individual, liberated from the present and occupied by the glowing, radiant images of an over-stimulated imagination, forgetful of time and space, is enabled to dispel the misery of his daily life or bodily pain—to procure by artificial means rest and sleep for the wearied body and soul in those instances in which these absolute necessities of life cannot be obtained in a normal manner, and, finally, the desire to become through the use of such agents more vigorous in creation and more energetic in action, all these may be the moving causes. Despite seas and mountains, amongst people of every race, development, and religion the use of narcotic substances makes its way. The habit of the pleasure and its effects produce an eager clamor for continued indulgence.

As everywhere, modification and excess are here contiguous. Used in the moderate quantities in which it produces a stimulating effect on the central nervous system, alcohol may at any rate be looked upon as a desirable article of luxury, not to be replaced by tea or coffee. If a laborer were to employ enough of the latter to obtain the stimulation which follows a given dose of alcohol, his means would soon suffer. Hence, and because alcohol tastes better than bad coffee, he takes the former.

But, unhappily, the narrow boundary-line separating permissible from unpermissible quantities, use from misuse, is only too often overstepped. Passion makes a plaything of man, devoid of will. There arises acute and, more frequently, chronic alcoholic poisoning,

with physical disturbances and intellectual defects in thinking, feeling, and willing. The unfortunate social consequences of this abuse have long given justified occasion to the state and to society for restrictive measures. Mohammedanism has perhaps chosen the most potent means of preventing drunkenness by making the forbidding of alcohol-drinking one of its elementary religious laws. And yet what quantities of alcohol are nevertheless consumed within its boundaries, besides opium and hashish!

The temperance movements of England and America, which are directed not only against the misuse of alcohol, but also against its use, cannot, in my judgment, boast of any success. What was formerly done in public is now performed in private, or, openly, under a flag which at a glance reveals the contraband to the practiced eye. In a large "temperance" hotel of New York I myself saw a lady pour eau-de-Cologne, from her pocket-vial into her ice-water! And precisely this increase of the eau-de-Cologne habit in America is looked upon as a public calimity. How many supposed enemies of alcohol amongst the ladies of Europe take Hoffmann's Drops several times daily—a mixture of alcohol and ether! There are many subterfuges which permit an indulgence in alcohol without shocking the public temperance conscience. Thus, for example, in Iowa some druggists have an alcohol trade sufficient to rouse the envy of many a European liquor-dealer. There they drink alcohol as a medicament!

Such a proscription of alcohol is foolish and futile. For the reasons before stated, it must remain as unsuccessful as that carried out with severity more than 300 years ago by the Spanish conquerors, forbidding coca-chewing, which, they declared, as did also the second Council at Lima, to be "a thing without benefit, created for the abuse and superstition of the Indians." The capacity of the serfs in the mines, however, deprived of the coca leaf, rapidly diminished, so that soon a palpable falling of in the output was observed. What had been forbidden before was not only permitted, but the natives were in fact forced to labor in the coca-plantations, and received, instead of bread and pay, coca leaves!

Energetic enforcement of abstinence may be able to achieve some success for the moment, but is soon circumvented with more or less acuteness. Of what benefit was the order issued by the French general in Egypt on the 8th of October, 1800, respecting the use of hashish preparations?

"Art. 1. The use of the liqueur made by several Moslems from hashish, as well as the smoking of the hemp-seed, is forbidden throughout Europe. The habitual drinkers and smokers of this herb lose their reason and fall into violent delirium, which often leads them into excesses of all sorts.

"Art. 2. The distillation of the hashish liqueur is forbidden throughout Egypt. The doors of those cafés or taverns and bar-rooms in which it is vended will be walled up, and the proprietors imprisoned for three months.

"Art. 3. All bales with hashish entering the customs shall be confiscated and publicly burned."

The drinking and smoking was then, as now, continued in secret. The Abbé Similien Chevillard reports that, despite the severest punishments and even the death-penalty, the progress of the opium-habit in Siam could not be impeded. Again, the severe ordinances formerly prevailing in Prussia against smoking proved no obstacle to the wide-spread growth of the habit, and perhaps even promoted it.

But history points to another possibility. The crusade against alcoholism in Ireland, instituted by the church during the first half of this century, and perhaps also the restriction of whisky-distilling, led the Irish peasants to a substitute. This they found in a substance which, long before the discovery of its medicinal action, was employed as an article of luxury—ether. Now the population of the northern part of Ireland drink the cheap ether—usually mixed with alcohol—which is produced in England. In Drapers-town and Cooktown the air is saturated on market-days with ether, and the same odor prevails in the coaches of the railroads. In these regions men, women, and children drink ether, and in time develop a remarkable tolerance for the stuff. The substance has been classed amongst poisons, so that it may be sold in apothecary shops only on presenta-

tion of a poison-permit. It is my conviction that this passion will never thus be overcome, since there are many interested in the largest possible sale of ether. Such a prophecy is based on other grounds. In Germany and elsewhere morphinism has augmented frightfully, although the laws forbidding the refilling of morphine prescriptions have been sternly impressed upon the apothecaries, and although no layman may receive an administration of morphine without a prescription. But here the boundless passion of the morphine-eater for their drug must be taken into account, as also the greed of many dealing in morphine, who have no scruple about disposing of the narcotic under any pretext—for example, under cover of the wholesale trade. The morphine-eater soon discovers these compliant instruments of his infatuation. The same is true of arsenic, which is used in no small quantities by women as a cosmetic.

It is therefore evident that *laws absolutely forbidding the employment of such substances for other than medicinal purposes may be evaded, and their consumption is not thus reduced.* We should regard it as one of the blessings of legislation if only a diminution were effected. This, however, has not been achieved hitherto, either in Germany or elsewhere, so far as acute or chronic alcoholism is concerned.

The proposed law, now under discussion, for combating the abuse of spirituous beverages, is intended to improve the state of things. It purposes: (1) To reduce chronic drunkenness through prohibitory measures, and to render the incorrigible subjects harmless to others; (2) to punish occasional drunkenness, in so far it disturbs the public peace or redounds to the injury of others. The resources of the police for the fulfilling of this design do not come within the sphere of medical discussion. In a toxicological respect, we are interested only in the terms "occasional" and "chronic" drunkenness (Trunkenheit und Trunksucht). Only in two places in the bill is this very important distinction made. From a medical point of view chronic drunkenness is produced by a passion of certain people for frequent quantities of alcoholic beverage, to the evident injury of their physical and mental health, as a result of which social or family duties are neglected. Such a drunkard may be seen completely overcome by drink, but a "drunken man" is not necessarily a drunkard by habit—on the contrary, he may be "a good man." The former suffers from a chronic and generally incurable malady, but the intoxication of one not a habitual drunkard, is an acute *malaise*, which disappears in a certain time, usually without after-effects. Nevertheless, in the draught of the law the tipsiness of the habitual drinker and occasional drunkenness are placed on the same level—both are punished; the former, to be sure, with greater severity than the latter as soon as public scandal results.

The theory upon which this result is based seems to me untenable. A single excess in drinking is scarcely to be condemned more severely than one in eating, although there is a vast difference in the symptoms. Public decency, however, may be just as much offended by discharging the contents of an overladen stomach on the street. In this case, as in that of an excess of drinking committed by one who is not an habitual drunkard, there is usually lacking the criminal intent to provoke public scandal. Nay, in many cases the criminal intent cannot be present, inasmuch as the individual does not begin to drink with the intention of becoming intoxicated. There is then lacking only a proper estimation of the concentration of the beverage and of the tolerance for the quantities taken. If such people are to be punished, there must be a definition of what constitutes the scandal. Is it—and many will straightway declare it is—the condition itself, i. e., the disturbance of locomotion, the total or partial loss of consciousness, the senseless chatter? Or is the verbal or actual insult of another, or any omission or commission which "offends the general sense of decency and right," to be regarded as a culpable motive? *If any punishment at all could be settled upon, it could be inflicted only for the commission of an act punishable in itself, which would also be criminal in a normal subject;* and even in such instances extenuating circumstances would have to enter into the determination of the penalty. On the other hand, I fully indorse the projected law in so far as it enacts that "he shall be punished who, in employments which require

special attention in order to guard against danger to the life and health of others, becomes intoxicated, or who assumes such functions when intoxicated, in other than cases of emergency." In every conceivable contingency this paragraph will do good. For here we have distinct violation of duty which warrants and requires punishment.

In the case of chronic or passionate drunkards the conditions are different. These people are mentally and physically the victims of chronic disease, and, in matters of criminal and civil law, they must be treated accordingly. They are, and ever remain, completely devoid of freedom, their sole and highest master being their passion. When such persons are placed under restraint, when they are incarcerated and deprived of their rights, when they are prevented from assuming or retaining positions in which they have a chance to injure their fellow-beings, directly or indirectly, everything is done which is commendable, from a medical point of view, in the way of police regulation, so far as the drinking individual is concerned. Nay, we should not punish lapses and crimes in a passionate drunkard, *i.e.*, in one of unsound mind, which, when committed in a state of intoxication by one not habitually so addicted, call for the infliction of a penalty. It is certainly justifiable to try all means, as recommended by the bill, to stem the abuse of alcohol by individuals. But it is just as desirable to enforce the old provision stipulating a limit of amylalcohol in drinking brandy, even if the producers suffer material loss.

Only the more striking cases of drunkenness occurring in public are aimed at by the bill—not habitual intoxication within the home circle. This is well-advised, and could, indeed, be scarcely enacted otherwise. For, unhappily, there is no means of rendering harmless such men (who in responsible positions are addicted to alcoholic excess and indulge themselves in private) at a time when the layman is not yet able to recognize the chronic action of alcohol. That even then mischief may be done by their alcoholism needs no proof. Intervention must be resorted to, however, as soon as the consequences of passionate drinking are once revealed in the form of neglect of official duties. Such individuals must be withdrawn from their customary spheres, not in punishment, but in protection of those exposed to danger.

Naturally, these considerations lead me to *a condition which, as an element inseparable from the regulation of the alcohol question, must, I am convinced, soon give rise to a legislative enactment; namely, the morphine habit.* Alcoholism seeks the greater number of its victims amongst laborers and artisans; morphinism, in those classes of society whose external position, breeding, and education are least disposed to arouse the suspicion of their subjection to this passion, uncombated by will or energy. This is the primary and substantial difference between alcoholism and morphinism. The second lies in the fact that the action of morphine is not followed by those unpleasant, visible, exciting, and depressing effects which are produced by alcohol. Thus, in the course of a very short time a great morphine-eating community has arisen, including some of the brightest minds of Germany—artists and scholars, university professors, diplomatists, officers, and merchants. *If alcohol injures the hands of the nation, morphine destroys its brain.* This condition was scarcely known when Fiedler and I concurrently reported such a case in 1874. Unhappily, how familiar it has since become!

Morphinism is a passion which germinates and develops in the home circle. Publicity is not thus offended by a scandalous spectacle. But the evils of a developed morphinomania may be much more far-reaching and disastrous to society and, indirectly, to the private welfare of innocent people. It would be pitiable if the individual were obliged to expiate in a degraded social standing this often self-acquired disease—*but, in so far as the state is enabled to act, it has no right to allow its offices to remain in the hands of drinkers, and still less of morphine-eaters.* It is not difficult to perceive the ground for such a regulation. With the exception of cocaine, there is, perhaps, no narcotic which may become so indispensable to the body as morphine. Morphine-hunger is much more clamorous than the longing for alcohol. The passionate drunkard can wait many hours after the disappearance of the action of alcohol before being

compelled to take more. In the case of the morphine-eater, on the other hand, the moment the time comes when the cells of the organism cry out for their stimulant, he is driven irresistibly toward a further dose. If it be denied him, body and mind soon suffer.

A judge addicted to the eating or injection of morphine cannot follow the proceedings and decide wisely, and an official examiner will be in no condition to do his duty and to decide as fairly as his office requires. To this it must be added that after a certain time the mental and moral powers are injured. Though the morphine-eating circus-rider may be never so daring in the arena, the surgeon dexterous in his operations, the clinician acute in diagnosis, they are nevertheless doomed men. Morphine renders their work possible yet a while, but is steadily shortening the chain by which they are enslaved. Neglect of duty, loss of energy and productive power, and, in a measure, the lowering of ethical standards soon ensue and accompany all forms of bodily ailment, rendering the accumulation of evils ultimately hopeless. Inasmuch as a positive cure of this morbid passion is seldom achieved, morphine-eaters may be really regarded as incurable. Such conditions, in which the body, and especially the central nervous system, supplies the impulse to a continued use of the drug, and in which the enfeebled will, aided by all the moral forces, is overcome by the clamor of the economy, are seldom or never rendered normal.

I am not unmindful of the difficulty of distinguishing practically between the heedless habitual use of the agent and its chronic employment under medical instructions. One man becomes a morphine-eater because he has heard of the agreeable conditions which it produces; another because he has applied the drug to the mitigation of physical pain, and has subsequently resorted to it in emotional distress, and finally from habit. A third class of subjects take morphine for the relief of chronic pain. So far as the public interest is here involved, no distinction, unfortunately, can be made between these three groups. Proof of the morphine-habit, or opiophagia, should be as much of a disqualification for official service as alcoholism. *The same applies to cocainism, chloroformism, chloralism, sulphonalism, etherism, and perhaps also to bromism.* All individuals thus afflicted should be excluded from responsible office, or, if the morbid condition be in an advanced stage, should be placed under a guardian or confined in an inebriates' asylum. I do not consider them accountable. But if the intervention of the state should not be favored in this respect—which would be very unfortunate, and would render the Alcohol Law only a fragment—then the sources of morphine should at least be better supervised. Greed constantly breaks through the limits and barriers by which the state seeks to impede the procurement of the alkaloid.

Let us not wait for radical legislative treatment of this evil until morphine is made artificially and is thus rendered cheap. Alcohol will then be dismissed, and morphine installed in its place. Even now this evil is extending in individual cases to those who should earn their bread, and not their morphine, in the sweat of their brow. At the present time several millions of human beings are slaves to opium! Whoever is in doubt as to the contagious power of such a passion should look to China; but recently acquainted with the drug, China is now its vanquished and enfeebled prey! Read the accounts of Prschewalski, who reports complete demoralization from opium of the troops, officers and privates, stationed in Mongolia. The employment of the agent is steadily growing in intensity and extent, especially since the northern provinces of China have begun to cultivate the poppy themselves, and have become independent of India and the Indian market. The Chinese have transported this passion with them over the ocean, and have prompted not a few American men and women to pay tribute to the same vice. In one of the largest cities of America opium dens were discovered, which on the outside looked like fine dress-goods shops. But the use of such an agent would have become widespread without the example of the Chinese in a land where the ground has been prepared for it by temperance agitation.

Morphinism is capable of wider distribution than opium-smoking or opium-eating, and the evil wrought is equally great. I

trust that my word of warning will be heard at this season of contemplated legislative action.

THE TREATMENT OF EPIDEMIC INFLUENZA BY REST AND STIMULANTS.*

BY LAWRENCE F. FLICK, M. D.

In selecting a treatment for a disease the physician should have for his object not only recovery, but absolute restoration to health. The curtailing of disease and the alleviation of pain can only be thought of where they can be accomplished without jeopardizing life or interfering with ultimate restoration to health. Where several treatments offer themselves, that should be selected which is least at variance with the physiological efforts of the body to throw off disease.

Epidemic influenza is a quick, desperate struggle on the part of Nature to throw off an invader, and experience teaches us that, unless the body is already weakened before the attack, she always comes out the victor. The severe and painful symptoms of the disease pass off, ordinarily, at least, within forty-eight hours, whether any treatment be instituted or not. This magical relief, which is so welcome to the patient, has been in turn ascribed to the lancet, the blister, the purge, the "sweat," the little pellet, analgesin, phenacetin, and "good old rye whiskey," as it occurred during the ministration of the friends of one or the other of these remedies. The fact is, however, that the relief is as much a part of the natural history of the disease as the pain itself.

The transient nature of influenza suggests the proper treatment. The wise mariner does not brave the ocean in a tempest if he can get a safe harbor. We know that epidemic influenza, although severe while it lasts, is of very short duration, and that if the victim of it can withstand the onslaught for a brief time he is safe. We also know that when the disease proves fatal it is invariably because the heart is unequal to the demand made upon it under the depressing influence of the disease. Knowing these facts, it seems to me imperative, as a matter of precaution, at least, to put the patient at absolute rest in the very beginning of the disease. It is only when the body is in the recumbent position that the labor of the heart is lessened, and for this reason rest in bed should be insisted on.

Were it possible for us to approximately estimate the resisting power of individuals, we might discriminate and send some persons to bed and permit others to keep on their feet. The experience of every physician makes it clear, however, that when dealing with this disease it is impossible to estimate the resisting power of anyone. Prudence, therefore, demands rest in the recumbent position for everyone who is attacked, no difference how mild the disease, for even mild cases sometimes prove fatal in the end.

Absolute rest is especially important, inasmuch as the duration of the disease depends largely upon the power of the system to throw it off quickly. In a strong, healthy individual the disease, as a rule, lasts a few days only, unless depressing treatment has been used. When, by reason of either inherent weakness in the individual, a waste of vital powers, or depressing treatment the disease maintains its hold beyond a few days, it extends into the bronchial tubes or into the alimentary canal, and thus not only sets up mechanical interference with the physiological action of these organs, but furnishes a much larger surface for the absorption of its poisonous products. It seems to me that the greatest danger from the disease lies in this extension. Cases frequently appear very mild at first, and the patient keeps on his feet for a week or more, when, all of a sudden, he finds himself stricken down by a severe illness. He will tell you that he had had a little running of the nose, some dryness in the throat, and had felt slightly chilly; that it had all passed off, although he had done nothing for it; but that now, all of a sudden, he feels terribly oppressed in his chest, and really fears that he is going to die. In such cases the disease has gradually extended during the interim that the patient thought himself well, and you really find him in a serious condition. It is such cases as these that most forcibly demonstrate the importance of rest, even when the attack is mild.

* Read before the Philadelphia County Medical Society, January 13th, 1892.

Rest treatment in influenza means more, however, than putting the patient to bed. His mind should at once be put at rest as far as this is possible. Usually the disease has a very irritating influence upon the nervous system. All mental occupation should, therefore, be abstained from, and benefit may be derived from the administration of bromides. Depressing sedatives or narcotics had better not be used.

When the disease has extended into the bronchial tubes, and the heart is much oppressed, great rest can be given the heart by the application of dry cups over the chest. The engorgement of the lungs disappears very rapidly under this treatment; but to get the full benefit of it the cups ought to be applied daily until all chest symptoms have disappeared. It requires actual observation to be able to appreciate what a burden is removed from an oppressed heart by the application of dry cups when it is laboring in its effort to force the blood through engorged lungs. Of all remedies it is the one upon which I would stake my life were I compelled to select but a single remedy under such circumstances.

As regards the use of stimulants in the treatment of epidemic influenza, I must say that I have derived but little benefit from the use of alcohol. In small doses it is indicated in some cases, but in large doses I have seen it do positive harm. In the quantities in which it is usually taken by people on their own responsibility it is certain to interfere with the physiological action of the stomach, and to keep up the irritability of the throat, which is so troublesome in influenza. I have repeatedly been compelled to insist upon absolute abstinence from alcohol before I could cure my patient of the very annoying throat-cough with which influenza left him. In looking over the Annals of Influenza, published by the Sydenham Society, I find frequent references made to the injurious effects of alcohol in the treatment of this disease. Many of the English practitioners of days gone by positively forbade the use of it to their patients.

There is another form of stimulant, however, which has a most benign effect in this disease, namely, ammonia. As far back as we have any record of influenza in the English language, this remedy has found encomiums from numerous physicians. I have used it in my own case when I had the disease, and on numerous patients, and my experience with it leads me to believe that it has a positive curative action, which cannot be wholly explained on the ground of its being a stimulant. I use it from the very outset of the disease, and I have seen the most distressing symptoms disappear after the administration of a few doses. I am well aware that the disappearance of those symptoms cannot positively be ascribed to treatment, as they go away without treatment; but cases in which I have used the ammonia treatment from the beginning seem to have run a shorter course than some others in which I first used quinine and phenacetin. The formula in which I usually prescribe the ammonia is as follows:

℞ Ammon. muriat., ʒ ij.
Ammon. bromidi, ʒ j.
Spts. ammon. aromat., f ʒ j.
Liq. ammon. acet., f ʒ iij.
Syr. simplicis, q. s. ad. f ʒ vj.

M. Sig.—Tablespoonful every three or four hours, well diluted with water.

During the epidemic which has just passed over I have used this remedy in every case that has applied to me for treatment, to the exclusion of all other treatment, except an astringent gargle and boracic acid applied to the nose and throat, and my results have been all that could be desired. Not only have I not had any fatalities, but I have not seen a single serious complication. In a few cases in which the treatment was not begun early in the disease I had engorgement of the lungs, which readily yielded to a single application of dry cups.

As a wind-up to this brief and hastily prepared contribution to the discussion upon the important subject before us, I will give a few extracts from the observations of the fathers of English medicine upon the treatment of influenza, as collated by the Sydenham Society. I give them because they are a plea for conservatism in the treatment of this disease, and, in a measure, corroborate what I have tried to show, that rest is the only essential factor for a successful issue, and that supporting treatment is a good adjunct. All the quotations will not bear this out, but the general complexion of them will.

Short, the historian of the epidemics from 1510 to 1581, speaks briefly of the treatment during the epidemic of 1510 as follows: "Bleeding and purging did hurt. Bole armomiac was chiefly useful, with oily lintuses, pectoral troches, and decoctions. Where blood was let, the disease proved malignant and pestilential, being attended with a violent, cruel, and unheard-of malignity, and made bad work."* Of the epidemic of 1557 he says: "Gentle bleeding the first day was useful. For the throat, gargles of plantin, scabious, and red rose-water, quinces, mulberries, and sealed earth were used. For the cough and hoarseness, pectoral and oyley mixtures. Scarification, with cupping, succeeded better than bleeding." Of the epidemic of 1580 he records: "Though all had it, few died in these countries except such as were let blood of, or had unsound viscera. . . . The cure consisted in repeated lenatives, cooling inciders, and pectorals." Dr. Willis, in his account of the epidemic of 1658, begins his paragraph on the cure by saying: "As to what belongs to the cure, when this disease is more lightly inflicted, its cure, for the most part, is left to Nature." He goes into detail about the treatment under certain circumstances, but advises few remedies, depending largely upon bleeding and diaphoretics. Dr. Molyneaux, in speaking of the epidemic of 1693, says: "This epidemic, as it then appeared, was not attended with many fatal results, and, in general, the persons recovered without any treatment." The treatment of the epidemic of 1709 is summed up in these few words: "Sweating and diuretics were the cure. Bleeding very pernicious or fatal." Dr. Huxham winds up his account of the epidemics of 1729 and 1743 in the following words: "On the whole, this disorder was rarely mortal unless by some very great error arising in the treatment of it." His own treatment consisted in the use of diaphoretics, emetics, blisters, pectorals, and bleeding in certain cases. He generally used gum ammoniac, with oxymel scillitic. Dr. Whytt, in his account of the epidemic of 1758, begins his record of the treatment by saying, as to the cure: "In the beginning, when the disease was mildest, it generally yielded to lying in bed, keeping the body open with clysters, and promoting sweat by warm dilutent liquors." For high fevers he recommended bleeding, and for the cough he gave laudanum, gum ammoniac, and sal ammoniac vol. He also used blisters. Dr. Daniel Rainey, who was physician to a house of industry in England during the epidemic of 1775, writes: "At this time the house contained about three hundred and sixty-seven paupers of different ages, from twelve to ninety, of different constitutions and temperaments, as may well be supposed among such a collection of people. About two hundred of these were attacked with the prevailing disorder, and, as it manifested in general no violent symptoms among the inhabitants at large except that several of the lower classes fell victims to their own folly in endeavoring to procure relief by making use of heated, spirituous, and malt liquors, I was determined to seize such a favorable opportunity of acting the part of a mere spectator of Nature, as I could act unrestrained by vulgar prejudices, where the patients had no idea that the physician did nothing for them if he did not drench their stomachs with nauseous medicines—I believe too often the case in general practice; and to my entire satisfaction I found that warm diluting, subacid drink—*nothing more than scalded buttermilk*—and confinement to bed brought the whole number through the complaint without either the aid of medicine or even the lancet, and yet no one fell a sacrifice." Dr. R. Hamilton, in writing of the epidemic of 1782, says: "Although the disease, considered simply in itself, may be looked upon as of little consequence, since it was often mild, and seldom fatal if not improperly treated, either by bleeding or by the use of too heating and irritating medicines, or by entire neglect, yet its causes, progress, and mode of attack may not be deemed altogether unworthy the attention of the medical philosopher." Following down the record as given by the Sydenham Society to 1837, we find the same conservative tone as to treatment running through the accounts of the various observers. Such as lived through two or more epidemics were even more conservative in the treatment of the disease during the second epidemic than during the first.

* The Annals of Influenza.

Dr. Huxham, who bled rather promiscuously in 1729, carefully selected his cases for bleeding in 1743. He writes, in 1843: "Indeed, whatever the state of the blood appeared to be, this disease would not admit of any great loss of blood—nay, if there was anything of a peripneumony which came on, it would by no means bear plentiful bleeding without the greatest ruin of the strength, and seldom more than barely once." Later on, physicians began to have doubts about the wisdom of bleeding at all, and gradually introduced supporting measures of treatment. Dr. Hamilton, giving his experience with the epidemic of 1782, writes: "I would not suffer myself to be bled. I trusted to gentle diaphoretics, laxatives, and dilutent drinks acidulated, with a linctus to mitigate the burning heat and pain I felt in my throat. Dr. Macqueen told me he suffered, also, much from it, and being subject to catarrhal affections, which venesection always relieved, he had recourse to it; but though he found it productive of some benefit to his headache for a short interval, yet his complaints rather recurred with additional force, from which he concluded that venesection did not give that permanent relief in the disease, as from the seeming inflammatory symptoms there was reason to expect." During the epidemic of 1803 bleeding was scarcely used by English physicians, and calomel in small doses, antimony, ammonia, and blisters were depended upon. During the epidemics of 1831, 1833, and 1837, pretty much the same treatment was used, except that bleeding was possibly more frequently resorted to.

THE VALUE OF HÆMOGLOBIN AS A NUTRIENT IN THE TREATMENT OF DISEASE.

BY W. THORNTON PARKER, M.D., M.M.S.S.

There is something very significant in the fact that now-a-days, as we look over the advertising columns of our medical journals, we find so much space devoted to advertisements calling attention to the value of nutrients. All this is readily explained when we consider the writings of our medical brethren, and when we look about us and take note of the prevailing diseases in our own practice. We find that necessity has produced this scientific effort to be found on every hand to obtain easily assimilated nutriment. In other words, this is an age when only very seldom is the lancet or cupping-glass called for, but when we are puzzled and troubled to provide remedies which shall be able to hasten the restorative process in our patients. The rush and hurry of our American life is very much responsible for this state of affairs. To overcome the existing need for nutrition is the task which confronts us in our daily practice.

Physicians are frequently asked whether or no beef-tea has any value as a nutrient. The answers to this question are interesting on account of their diversity, for while some emphatically condemn all beef extracts as useless, others declare they could not practice medicine without beef-tea. Now "beef-tea" means about as much as the term "bread." We all know that the "staff of life" is absolutely indispensable as a nutrient, and yet in hotel, boarding house, and private home how frequently we find so-called "bread" not only unfit for nutriment, but actually injurious and even dangerous. Physicians are frequently called upon to treat diseases resulting from the use of bad bread. With beef-tea we find the same conditions obtaining—there are several popular preparations of beef containing comparatively little nutrient. We might liken some preparations of beef extract to corn beef, which is one of the most miserable apologies for beef that we know of.

The very general confidence shown by the medical profession in some of the preparations known as raw beef foods is not a mere wave of popularity without cause or reason, but has reached its position after careful experience. That these raw foods are really valuable as nutrients there can be no doubt. Our experience with them in the sick-room induces us to be willing to bear grateful testimony as to their usefulness—but as to the process of their manufacture we are ignorant. So, too, with beef extracts; their value in the treatment of disease has also been recognized for many years, and especially during the late great epidemics of influenza. We certainly do not exaggerate it when we affirm that beef extracts have been the means of saving many valuable lives.

I have already called attention in our medical journals to the preparations of beef-meal known as the Mosquera-Julia Beef-Meal Products. I have found these especially useful in the treatment of influenza. Teacupful doses of hot beef-meal in solution, used repeatedly throughout the day and night, have been found most valuable adjuncts in the treatment of this often very serious disease. In bronchitis, pneumonia, and other wasting diseases, beef extract and beef-meal are simply invaluable. In the convalescence of all diseases, in the condition of pregnancy, in the recovery from accidents, in many diseases of the stomach and intestines, these preparations will be found almost indispensable. A cup of hot Mosquera for the physician before starting out on a night call, or when returning from a cold ride, or after a night of weary waiting and working, brings its strong sustaining powers into grateful recognition.

But this new preparation of Hæmoglobin, made after the formula Messrs. Parke, Davis & Co. have furnished to the profession—and, it is needless to add, with their well known skill and faithfulness—is a really valuable nutrient, of which we have heard as yet but little. Here we have something more than merely a beef extract—we have a highly nutritious preparation, combining the valuable nutrients of beef with malt and pure wine. The last-named ingredient is not an excess, and this preparation can be safely used in the anæmia of childhood and youth and in the weak condition of old age, as well as in that stage of life known as the "climacteric." It seems to me that the advent of Hæmoglobin is opportune. The combination ought to be, and I believe really is, a valuable one. I do not hesitate to recommend it in the treatment of diseases of women, and as a nutrient for our overworked students and over-active business men. "There is a tide in the affairs of men, which, taken at the flood, leads on to fortune," etc. And so it is with physical life—there is often a time when a wineglass of Hæmoglobin, or a cup of hot Mosquera, or of ordinary beef-tea, or even a cup of hot milk, will save a person from serious illness, and perhaps from the grip of death itself. There are moments when prompt treatment will head off a dangerous attack, which in an unguarded moment would be fraught with disastrous results.

The use of these preparations—I refer especially to Hæmoglobin and the Mosquera—should be borne in mind by medical practitioners in general, as opportunities for exhibition present themselves. It is not in the magic of potential drugs or in the skill of scientific dosing that lives are saved so much perhaps as in the faithful, patient nursing of mother or wife. How often we are called to attend patients and upon our arrival find that the mother has, in point of fact, done all that is required, and that nothing now remains for us to do but to gravely approve, or leave a prescription of comparatively little value. Nursing and nutrition, and not dosing, are what most patients need; and the physician who recognizes this fact, and can estimate what is required and how to afford the relief, is worth more than many scientific dosers. We all know the truism that our lives are made up of atoms and that they depend upon little things, but at the present day one of the great things in the practice of medicine is unquestionably nutrition.

Manchester-by-the-Sea, Mass.

CANCER OF UTERUS—CARCINOMA.

BY DR. E. E. MONTGOMERY.

I bring before you a patient this morning with the following history: She is fifty-six years of age; mother living, aged ninety-one; father died thirty-six years ago, at the age of sixty-two, of pleurisy. She has one sister living, in good health, and four sisters dead, two of whom died of consumption, aged respectively nineteen and forty. She has had two brothers die of consumption and one brother of hepatic disease. One of her children died in infancy, one of consumption, and one met with a violent death. She has always enjoyed good health until recently. She had one miscarriage at six months, and menstruation ceased at forty-nine, since which time she has suffered from leucorrhœa. This discharge increased very greatly within the last year, and in January so changed its character that it became bloody. Since that time she has had a

number of hæmorrhages. She suffers very greatly from pain in the abdomen and in the genitalia. As you look at the patient you see that she is very pale, anæmic, lips are bloodless, that she presents an appearance indicating the presence of some profound disease. I shall not attempt to make an examination before you, as I would not be able to demonstrate the physical signs present, and would only risk the patient's having a severe hæmorrhage. The disease, however, has extended to such a degree that the vaginal portion of the uterus is completely destroyed, and the disease has extended upon the vagina. Making examination by the rectum, we find the uterus is fixed, infiltration has taken place into the broad ligament upon either side so that the entire organ and its appendages are involved.

The history presented by this patient is a sad one, and one from which you will have but little difficulty in forming an idea of the character of the disease present. The group of symptoms from which you will be led to form your diagnosis is as follows: First, the profuse discharge; second, hæmorrhage; third, the increased fœtor; fourth, severe pain; fifth, constitutional effect. This group of symptoms occurring in a patient at the age of this one would at once impress you with the fact that you had to deal with malignant disease. Cancer of the uterus usually begins in the mucous membrane of the organ in the form of an increase of its cellular tissue. These collections of cells may subsequently infiltrate the deeper structures so that the entire cervix or wall of the uterus may be involved, and even the structures beyond it. As a result of the multiplication of cells we may have the entire vagina filled up with a mass of such tissue. As we have said, the disease usually begins in the mucous membrane and in that of the cervix. In but two per cent. of the cases do we find that the mucous membrane of the body of the organ is the original site of the disease. You can readily understand why the cervix should be most frequently the seat of the development of the trouble, for it is the cervix which suffers mostly from lesions occurring during parturition. This view of the origin of the trouble is still further confirmed by the fact that cancer of the uterus occurs in the great majority of cases in women who have borne children, for, while it is true that it does occur in women who are sterile or unmarried, such cases are the exception. After injuries to the cervix, Nature makes an effort towards their repair by increase of cellular tissue; the parts become infiltrated, tissues are formed with low vitality, which, as the patient approaches the period of the climacteric, undergo degeneration and are likely to result in the development of malignant disease. It is a curious fact in the history of these troubles that in those patients in whom there is a family disposition to the development of phthisis, one member of the family may have cancer, while several others may have phthisis. It is probable that there is a peculiar susceptibility in such patients to the development of such diseased conditions.

It is not improbable that cancer will be proved to be a germ disease and the cellular infiltration to originate from the presence or irritation of these germs. The disease further involves the muscular structure of the cervix, is epithelial in its origin, and does not begin in the connective tissue. As it develops it is likely to extend to a greater degree upon the surface of the mucous membrane than the deeper structures are involved. In the development of such a diseased condition you will ask what are the particular symptoms which will attract our attention to the particular disease, in order that we may be able to eradicate it before it has produced its most serious results.

One of the earliest symptoms of the disease is hæmorrhage. The patient, if the disease develops during menstrual life, will suffer from an increased flow at each period, There may also be a discharge of blood between the periods. The bleeding may not amount to what might be considered a hæmorrhage at first, but you will find the patient surprised with a quite severe hæmorrhage in the intervals between the menstrual periods. She will suffer from a profuse and watery discharge, which often has the odor of decayed flesh and is extremely irritating to the surfaces with which it comes in contact. This discharge later will be streaked with blood or continuously bloody. If the disease has not begun until after the cessa-

tion of menstruation, the patient will probably suspect that there has been a return of her menses. Whenever such hæmorrhage occurs, whether before or after menstruation, do not hesitate to insist upon having an opportunity to make a thorough and careful examination as to the cause of the symptoms. The progress of the disease is of such a character, and its results so sad, that we should lose no time in tentative measures, but should urge the possible gravity of the condition as a cause for prompt examination. It should be remembered that malignant disease does not necessarily occur only at or near the climacteric; women as young as twenty years have been seen in this hospital, dying from cancer of the uterus and vagina. It more frequently occurs, however, in women who have borne children. Following the presence of hæmorrhage, and the offensive discharge of a thin, watery character having an offensive odor, we find the general health of the patient becomes affected. She loses flesh, becomes pale, anæmic, and later of a peculiar straw color, which is recognized as the cancerous cachexia. This results from the loss through the hæmorrhage and discharge, and, in addition, from the absorption of septic material from pockets within the breaking-down malignant masses. Thus we have a condition of sapræmia, in which the patient is undergoing a constant state of blood-poisoning. Not infrequently, after the removal of diseased masses, and healthy tissue is reached, preventing further absorption of the septic material, we find the patient gains in flesh and strength, regains a rosy appearance, and secures a condition of health such as to lead her and her friends to suspect that a mistake has been made as to the character of the disease.

The progress of the disease is a continuous one; in addition to the symptoms we have enumerated, one of the most frequent and constant symptoms is that of pain—pain not only in the seat of disease, but radiating from it, and of such a character as to give the patient no rest unless she is under the influence of anodynes. With loss of rest and continual pain, with the continuous waste, and the persistent absorption of septic material, it is not surprising that the fatal progress of the disease is rapid. The duration of the disease in the majority of cases varies from one to three years; it is more likely to be the shorter period in the younger patients and in those suffering from predisposition to tubercular troubles.

It is exceedingly sad to stand beside a patient suffering from such a disease when it has made such progress as to be already beyond the hope of any radical relief. It is difficult to so arrange our thoughts as to give such a patient a ray of hope and yet deal honestly with her. The course of the disease, after the infiltration of the uterus and breaking down, is to involve the surrounding structures, the bladder in front and the rectum posteriorly. An opening may take place into the bladder through which the urine passes into the vagina, or into the rectum, by which the vagina is made a cloaca, where urine, fæces, and cancerous discharge are found, giving rise to the most disagreeable odor imaginable. Face to face with such a disease, it becomes us to consider carefully the methods by which it may be combated. When the disease is confined to the uterus, when the uterus is freely movable, even though one or the other lip of the organ be alone involved, the operation above all others that should be done is extirpation of the uterus. The removal of the entire uterus is just as clearly indicated in cancer of any portion of the organ as the removal of the entire breast when a lobe of that organ is the seat of the disease. Indeed, in cancer of the breast we are better able to follow the disease than in the uterus, for the reason that we are able to proceed to the extirpation of the glands in the axilla, where the disease makes its first transmigration. Fortunately, however, the disease is slower in traveling beyond the uterine walls into the lymphatics than it is when the breast is the seat of disease.

There has been much discussion as to the relative advantages of extirpation of the uterus and high amputation of the cervix. The reason why I prefer the former to the amputation of the cervix is that the mucous membrane is more likely to be involved to a greater degree than is the muscular structure of the uterus, and if we remove a portion of the organ, leaving a few germs remaining, we will have the disease rapidly redeveloped.

Again, the mortality of the operation under more improved methods is scarcely, if any, more favorable to the high amputation. In women who are still menstruating, the portion of the uterus left after the latter operation is likely to be the source of discomfort to the patient from our inability always to control the cicatrization that is likely to occur in the canal following it, and the consequent retention of menstrual and other discharges.

A number of methods of procedure have been suggested for extirpation of the uterus, the earlier operations being made by opening the abdomen and doing what is known as abdominal hysterectomy. It was a plan in which it was difficult to avoid soiling the peritoneal cavity from the uterine discharge, and also difficult to protect structures, such as the ureter, from injury during the removal of the uterus. The control of hæmorrhage is also more difficult, so that, under all these considerations, the more preferable plan of procedure was considered to be through the vagina. In a hundred cases of removal of the uterus through the abdomen, there was a mortality of seventy-one per cent. A mortality so great as this, in which no absolute promise could be given the patient of a radical cure, was one to which neither patient nor physician was likely to resort. In 1877 Czerney performed the operation of removal of the uterus through the vagina. This operation had been done before, but never in so systematic a manner as he suggested it. He was not, however, particularly impressed with its advantages, and it was not until several successful operations had been done by others that he again resorted to it. Since that time it has been done with great frequency. In the technique of the operation there is a great variety of methods of procedure. Thus, the uterus is separated in front and behind, has the fundus drawn down backward, drawn down forward, or drawn down in position by traction upon the cervix. The broad ligaments have been ligated *en masse*, ligated in sections, ligated and clamped, and clamped alone; the peritoneal surfaces have been sutured, the vaginal surfaces sutured, the peritoneal and vaginal surfaces sutured; drainage has been done with drainage tubes and gauze. The operation under these methods of procedure has occupied from an hour and half to three or four hours, the patient suffering greatly from shock as the result of the long-protracted operation and the long-continued anæsthesia.

Richelot was probably the first to advocate the use of clamps to control hæmorrhage. Under the former methods the mortality of the operation was about fifteen per cent.; under the latter it has been reduced to four or five per cent., a mortality which differs very little from that of the removal of the ovaries or other abdominal operations. In my judgment the introduction of the clamp as a method of preventing hæmorrhage is a very important step in the performance of the operation. The time required has been very greatly shortened. Indeed, in a case performed in this institution a little over a year ago, I did the operation in fifteen minutes. The plan of procedure consists in, first, careful irrigation, removing from the vagina all diseased tissue, seizing the cervix with a pair of strong forceps, separating it from the vagina by a circular incision so made as to avoid injury to the bladder or ureters in front. The vagina is pushed off in front, until the peritoneum is reached posteriorly in the same way. When the peritoneum is opened behind, and a large sponge introduced with a view of keeping back the intestines and preventing the peritoneal cavity from being soiled with blood or other discharge, the anterior peritoneum is then opened and the finger passed posteriorly over the broad ligament. With these clamps of modified Greig-Smith pattern, one blade is passed posterior and the other anterior to the broad ligament, brought together and screwed down, so that the ligament is securely held and any bleeding absolutely controlled. The uterus is then cut off on one side, which facilitates the introduction of the clamp upon the other, or, where it is thought preferable not to use the clamp, the other side may be readily ligated. Cutting off the second broad ligament permits the uterus to be withdrawn. Holding the clamps apart, the large sponge in the abdominal cavity is then removed, and in so doing the edges of the peritoneum are smoothed out, and the anterior and posterior surfaces fall in contact. A roll of iodoform gauze is carried up

the vagina to the edges of the peritoneum; this serves as a drain, and also prevents the prolapse downward of the intestines. It may be permitted to remain two or three days. The clamps are removed at the end of twenty-four hours. In suitable cases where the vagina is dilated or quite roomy, where the uterus is readily displaced downward, and there is no involvement of its lateral ligaments, the operation is an easy one. In cases, however, in which the vagina is small, the uterus large, in which there are possible adhesions between the ovaries and tubes, with enlargement of these organs from previous inflammatory troubles, it would be attended with considerable difficulty. With distended tubes and ovaries filled with irritating secretion, we can readily understand that we might not be able to remove the entire tube and ovary with safety, and the retention of a portion of it, filled with secretion which, upon its escape into the peritoneal cavity, would result in peritoneal inflammation, would render the operation one of the greatest difficulty.

In such a patient, then, a better plan of procedure, in my judgment, is the adaptation of the sacral resection to the removal of the uterus. This is a modification of the operation known as Kraske's procedure. It is done by making a bow-shaped incision from the right sacro-iliac synchondrosis to the left side, and just beyond the point of the coccyx, when the patient is lying in Sims' position. The tissues are dissected off from the sacrum and coccyx, the latter separated from its attachments and enucleated. The sacrum is then dissected from just below the third sacral foramen, leaving the foramen upon the right side untouched. This brings us upon the posterior surface of the rectum, which may be pushed to the left side, and the peritoneum opened, bringing us to the fundus of the uterus. Incision is made upon the right side for the reason that the rectum is situated a little more to the left side, and a greater space is afforded. The uterus can now be grasped, turned to one side, its broad ligament ligated in such a way as to permit the removal of ovary and tube, and then the organ, when large, rotated, so that the other side can be reached in a similar way. The upper half of each broad ligament is ligated and cut off, and the vagina is opened and dissected anteriorly until the peritoneum is reached, when the remaining portions of the broad ligaments may each be ligated in two sections, and the uterus removed. This method of procedure affords us an opportunity to determine the thickness of the broad ligament, the relation of its vessels and of the urethra; after the removal of the uterus, the vessels may be seen and religated, if hæmorrhage is not completely controlled. The peritoneal surfaces above the vagina may then be sutured with catgut, cutting off entirely the possibility of any soiling from the vagina or any prolapse of the intestines. After this, the posterior opening into the peritoneum may be sutured and the closing of the peritoneal cavity completed.

It is not an operation to be advocated where the uterus can be readily removed through the vagina, but in such cases as described above the operation affords an easy method of removing the organ, and with no special inconvenience subsequently. It may be supposed that the removal of a portion of the vertebræ will affect the subsequent comfort of the patient. You will remember, however, that the spinal canal terminates in the last lumbar vertebræ, and is continued in the sacrum, as the filum terminale, which has no communication with the membranes covering the cord. The incision in the sacrum is made below the third sacral foramen, for the reason that it gives exit to the last one of the nerves to enter into the formation of the sacral plexus. The fourth and fifth nerves are distributed to the bladder and the rectum, and in order that these organs may not be unduly affected, our incision is confined to one side, so that the loss of nervous supply there may be compensated by its retention upon the other. The posterior sacral nerves are of but very little importance, being distributed to the muscles over the surface. I have done this operation three times, once for cancer involving the rectum, posterior wall of the vagina, and the uterus. In this case, three inches of the middle part of the rectum, the upper part of the vagina, the uterus, and ovaries were removed. The rectum was reunited, restoring the calibre of the gut and the control by

the sphincter. The patient recovered from the operation, it having been done in May, and died in the following October from an intercurrent trouble.

The second patient was sterile, had an undilated vagina, and ovaries and tubes bound down behind the uterus and greatly enlarged as the result of disease of some years' standing; she also had epithelioma of the cervix. The operation as described above was done, removing the uterus, ovaries, and tubes, and pushing the rectum to one side. The patient has recovered and has experienced no inconvenience from the manner in which the operation was performed.

The third case is now in my private hospital, a woman who has undergone an operation for the removal of about four inches of the lower part of the rectum for stricture. This we dissected up from the anus, opening into the peritoneal cavity, stitched the peritoneum higher upon the bowel, and drew the latter down and stitched it fast to the skin, making an artificial anus at the site of the removal of the sacrum. We believe that in so doing we are affording the patient an opening that is less likely to contract than if placed in the inguinal region, and one which will enable her to evacuate the contents of the bowel without assuming an unnatural attitude. By wearing a napkin, a pad could be held over the opening in such a way as to decrease the danger of soiling her clothing.

Philadelphia.

MICHIGAN COMPLIMENTED.

The last Bulletin of the Tennessee State Board of Health, Jan., 1892, speaking of Michigan, says: "This State, with Massachusetts, may justly claim a leading position in the public health movement. The people support their State Board of Health, which carries on the work 'under the long-continued guidance of one who is, perhaps, the most eminent sanitary authority in the western world.'

"The proceedings fill a closely-printed octavo pamphlet of forty-three pages, and are able papers and discussions of the points in which the parties requesting the convention are directly interested.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

B. W. PALMER, A. M., M. D., Editor.

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Editorial.

PROFESSIONAL MANNERS.

S. Weir Mitchell, M.D., in his interesting sketches entitled "Characteristics," now running in The Century, discusses entertainingly the manners of the doctor and their influence on his patient.

There is no place, he says, where good breeding has so sweet a chance as at the bedside. There are many substitutes, but the sick man is a shrewd detective, and, sooner or later, gets at the true man inside the doctor.

There are men who possess cheap manufactured manners, adapted, as they believe, to the wants of the sick-room. According to the man and his temperament do these manners vary, and represent sympathetic cheerfulness or sympathetic gloom. They have their successes and their commercial value, and may be of such skillful make as to deceive for a time even clever women, which is saying a great deal for the manufacturer.

Then comes the rarer man who is naturally tender in his contact with the sick, and who is by good fortune full of educated tact. He has the dramatic quality of instinctive sympathy, and, above all, knows how to control it. If he has directness of character too, although he may make mistakes (as who does not?), he will be, on the whole, the best adviser for the sick, and the completeness of his value will depend upon mental qualities which he may or may not possess in large amount.

But, over and above all this, there is some mystery in the way in which certain men refresh the patient with their presence. Every doctor who has this power—and sooner or later he is sure to know he has it—also learns that there are days when he has it

not. It is in part a question of his own physical state; at times the virtue has gone out of him.

A SUBSTITUTE FOR KEELEY'S CURE FOR DRUNKENNESS.

Whatever may be the opinion of the profession as to Keeley's methods, there is no question that, with the aid of the newspaper press, public opinion still has faith in his statements. We learn that the secret of the Chicago Tribune's ardent espousal of the Keeley treatment is the ownership of stock in Keeley's institution.

The essential features of Keeley's treatment are not new—that the administration of certain drugs will create a positive distaste for alcohol has long been established, and is, within proper limits and with no pretensions as to secresy or mystery, the routine practice in treating the alcohol habit.

It behooves the profession, therefore, to counteract the effects of such methods as have been adopted by Keeley by making known to these victims of the alcoholic habit that Keeley is extorting money from patients under pretense of employing a method unknown to others.

Dr. J. L. Gray, in a lecture published in the Journal of Materia Medica, gives publicity to a method for the treatment of alcoholism, morphinism, and the cocaine habit, which he believes to be identical with Keeley's method, except that Keeley includes in the formula he uses absinthe and aloes, in addition to the remedies employed by Dr. Gray.

Dr. Gray describes his method of treatment as follows:

The plan of treatment in vogue at the institution with which I am connected has been in operation over three years, and has produced in general much more favorable results than I could have ever hoped for under the older methods. When a patient is admitted to the sanitarium, after the preliminary examination, he is assigned a room and given a pint of good whisky. His regular treatment is commenced by the administration of an active laxative, after which, at ten o'clock in the morning, at noon, at four, and at eight o'clock in the afternoon and evening, he receives a hypodermatic injection of chloride of gold and sodium and the nitrate of strychnia, one-tenth grain of the former and one-fortieth grain of the latter. Every two hours the patient also takes a teaspoonful of the following mixture:

℞ Chloride of gold and sodium, gr. xij.
Muriate of ammonia, gr. vj.
Nitrate of strychnia, gr. j.
Atropine, gr. ¼.
Comp. fl. ext. cinchona, ℥ iij.
Fluid ext. coca, ℥ j.
Glycerin, ℥ j.
Aquæ destillat., ℥ j.

He is allowed all the whisky he can drink, and is urged to take it. Our treatment is kept up from three to six weeks, according to the character of the case. The theory upon which this treatment is based is that the inebriate is the victim of a distinct disease of that portion of the brain and central nervous system which is the seat of the will. The ability of this portion of the brain to properly exercise its functions is lessened, and as a natural consequence the ability of the individual to control his actions is not up to a normal condition.

From seventy-five to eighty per cent. of all the drunkards who come under our treatment are permanently cured. So far, therefore, as my own experience goes, I can say positively drinking is curable under intelligent medical treatment.

WHO SHALL DECIDE WHEN EXPERTS DISAGREE?

The testimony of the experts in the recent trial of Carlyle W. Harris for poisoning his wife with morphine brought out prominently again the oft-proven fact that such evidence is fatally contradictory, and serves to confuse rather than enlighten a jury.

It is not very gratifying to realize that, in the present state of medical and chemical knowledge, the best informed authorities are utterly at variance as to their views of the questions at issue.

It would appear that the present methods of eliciting testimony bearing on criminal cases from medical and chemical experts is radically at fault, and that it would better promote the interests of justice if the court were authorized to summon the experts, and to fix their compensation to be paid by the interest demanding it. A body of experts thus appointed, and not bound by affiliation with either side, could consistently and efficiently act impartially.

Notes and News.

A Leap Year Prescription.—

She is a winsome young M. D.:
He has a strange sensation;
The symptoms show, 'tis plain to see,
Aortic inflammation

He calls her in—"Oh, doctor, I'm
One of your ailing pupils;
What shall I take—oh, say in time—
How many grains or scruples?"

She notes his symptoms—'tis enough—
(A blush her charms quadruples);
"Take *me*," she murmurs, "*quantum suf.*
And never mind the scruples."

—*Tommy Dod.*

Is Electrical Death Instantaneous?—

The executions at Sing Sing prison have excited much medical press comment. Experts seem to disagree as to their conclusions reached concerning the advisability of adopting this method of execution in preference to hanging. The Medical Record editorially condemns electrical death as inhuman and revolting, and declares for hanging. In the Journal of the American Medical Association it is stated: A medical declaration in reference to the recent execution by electricity at Sing Sing prison, in New York, has been officially filed in the appropriate bureau. It is signed by Dr. Ira Van Gieson, who had charge of the autopsy.

Dr. Van Gieson regards electrical execution as practically instantaneous and apparently painless.

Still others point out that the guillotine is the speediest, and therefore the most human, method of execution for criminals.

Obstructing the Progress of Science.—

An amusing situation of affairs in the higher grade of the public schools of St. Louis was recently the outcome of an endeavor to obtain statistics as to the physical condition of school children, for the purpose of establishing correct standards of physique at different ages in the period of growth.

Though the reasons for making the measurements of school children were all-sufficient, the advantage to be derived therefrom in the way of obtaining a normal standard for apportioning mental work to physical capacity, great, and the conditions under which they were to be conducted very slightly discommoding, many of the young ladies could not see it in that light, and concluded, in a body, that it was highly undignified to be the subject of any kind of a physical investigation, and threatened revolt and mutiny and all sorts of things. The result was that in some of the schools the recording was discontinued until a little familiarity with the subject could dissipate some of its shocking aspects.—*Medical Fortnightly.*

The Physician and the Painter.—

The New York Times quotes the following from the Pall Mall Gazette:

Here is a good story of a doctor and a painter's wife. The doctor's name does not appear, but the painter was Meissonier. Mme. Meissonier sent for the family physician in a great hurry. He came, thinking some illness had overtaken the artist. But it was not the artist; it was only a lap-dog. He pocketed his pride and attended the patient, who soon recovered. At the end of the year the bill came in, but there was no item for attendance on a dog. Mme. Meissonier noticed the omission, and told the doctor to charge. He would not charge; he said he could not charge; he was not a vet he was very glad to be kind to the dog, etc. The lady insisted. "Well," said the doctor, "the hinges of my garden gate are rusty; ask M. Meissonier to bring his brush and paint them for me."

A Medical Strike.—

There is a vacancy on the medical staff of the hospital in Tilsit, Prussia. When the vacancy occurred the municipal authorities advertised for candidates, stating that the salary would be 1,000 marks ($250) a year. Thereupon the local medical society caused an announcement to be inserted in the paper, immediately below the advertisement of the city fathers, stating that the salary was too small and that none of the physicians of the place would accept an appointment for less than 1,500 marks. They also advised physicians from outside to think awhile before presenting themselves as candidates for the position, intimating that the lot of anyone

accepting the appointment would not be a happy one. The mayor of the town acknowledges that the salary offered is very small and almost insulting in its minuteness, yet he thinks the city can buy some needy doctor for the price.—*Medical Record.*

Love and the Doctor.—

Some very clever verses with this title appear in the Journal d'Hygiène, October 22, 1891, in which the similarities and differences of the merciless god and the modern physician are carefully summed up. Both are on duty day and night. "And this is a resemblance," together with the fact that each is blind. One is famous in old age, the other in youth. "And here is a difference." One feel the pulse, the other touches the heart. Each is something of a charlatan. "*Voilà la ressemblance!*" One leaves when we are doing well, and the other departs in time of stress. "*Voilà la différence!*"

University of Pennsylvania.—

The alumni of all departments of the University of Pennsylvania will give a dinner on the evening of Saturday, February 27th, 1892, at Musical Fund Hall, with the object of bringing together a large number of the graduates of the University in social intercourse in a dignified and agreeable manner. It is also designed by this reunion to inaugurate a series of triennial dinners, which will serve to mark various epochs in the life of the University.

The Pan-American Medical Congress in New York State.—

At a meeting of the Medical Society of the State of New York at Albany, Feb. 5th, a committee was appointed to coöperate in promoting the interests of the Pan-American Medical Congress. The committee consisted of Drs. A. Walter Suiter, A Vander Veer, James D. Spencer, Seneca D. Powell, W. W. Potter, D. B. St. John Roosa, and John O. Roe.

Meeting of the Practitioners' Club.—

At the regular meeting of this now popular club, Dec. 28th, 1891, the subject discussed was Methods of Medical Instruction and Their Results. Theoretical and clinical teaching both had enthusiastic adherents. Dr. V. C. Vaughan, of the University of Michigan, was elected an honorary member, being the first physician to enjoy this distinction.

Suicide Among Physicians.—

The Boston Medical and Surgical Journal notes the fact that physicians not only headed the list of suicides last year, but that they have headed it every year in the last ten. This promises to be still more conspicuous this year, as in the first twelve days of January no less than seven physicians committed suicide in the United States.—*Medical Record.*

Bequests to New York Hospitals.—

Under the will of the late Mrs. Mary Stuart about $800,000 is donated to twelve medical institutions in New York and vicinity. The Presbyterian Hospital receives the largest single bequest, a sum estimated as not less than $310,000. The Woman's Hospital and four others will receive upwards of $80,000, while a few dispensaries are remembered to the extent of $5,000.

An Alleged Bacillus of Gout.—

Dr. Edward Grün writes to The Lancet that he has, in three consecutive cases of acute gout, found the blood to be swarming with a long encapsuled bacillus, side by side with which numerous crystals of biurate of soda were to be seen. He promises to give a full description of the bacillus in a future communication.

The Death of Professor von Brücke.—

The Wiener klinische Wochenschrift announces that Dr. Ernst W. Ritter von Brücke, emeritus professor of physiology in the University of Vienna, died on the 7th of January, at the age of seventy-two.

The Sanitary Convention.—

The thirty-seventh Sanitary Convention will be held under the auspices of the State Board of Health, Thursday and Friday, March 3d and 4th, 1892, at Holland, Mich.

The New Health Officer.—

Dr. Wm. T. Jenkins has been appointed Health Officer of the Port of New York.

Therapeutic Brevities.

Physostigma in Hiccough.—In a recent issue of the Edinburgh Medical Journal Mr. Smart calls attention to a case of obstinate hiccough from chronic alcoholism, so persistent as to prevent sleep and the ingestion of food. No relief followed the use of any drugs, except after the administration of dangerously large doses of morphia persisted in for six days. My object in this note is to assure the profession of the value of physostigma in these cases of obstinate hiccough, from whatever cause. The cases that I have seen have yielded to its influence within two or three days. The last case was precisely like the one reported by Mr. Smart, and forty-eight hours' use of this drug settled the hiccough. Another case of hysterical hiccough, of three months' duration, that had resisted all other agents, was speedily controlled in the same way. A good fluid extract was the form given. The dose is four to eight drops every two or three hours, pushed to the point of causing toxic symptoms.—H. M. Shallenberger, M. D., in *Medical Record.*

Dietetic Value of Pineapple Juice.—Some time ago the late Dr. V. Marcano, of Venezuela, noted that pineapple juice contained a proteid digesting substance. Recently, Prof. R. H. Chittenden, assisted by Messrs. E. P. Joslin and F. S. Meara, have investigated the matter fully, and announce facts which are likely to give to the succulent pineapple a prominent place in dietetics.

Pineapple juice is an acid fluid of specific gravity of 1.043. An ordinary pineapple yields 600 to 800 cubic centimetres of it. The proteid-digesting power is quite remarkable in its intensity. Three ounces of the juice will dissolve ten or fifteen grains of dried albumen in four hours. The action takes place in acid, neutral, or even alkaline media, thus resembling trypsin more than pepsin. It acts best in neutral solutions. The pineapple juice contains also a milk-curdling ferment.

Salicylate of Soda in Pleuritic Exudation.—Dr. Oerl has, during the past five years, treated nine similar cases of pleuritic effusion with salicylate of soda, after other remedies, such as phenacetin, pilocarpine, etc., had failed, and, with the exception of two instances, the results were favorable. In these two the resorption was only partial. The author concludes: 1. Serous pleuritic exudations of long standing may be removed by the administration of the salicylate of soda. 2. The salicylate has in exudative pleuritis, just as in polyarthritis, an apparently specific effect. 3. The fact that, so far as experience with this remedy has gone, no new collection of fluid is observed, makes surgical interference in serous pleuritic exudation not only not imperative, but, indeed, puts operative procedures in the background.—*Medizinal Zeitung.*

Application of Mydriatic Alkaloids.—Dr. Robert Bartholow expresses his preferences as follows:

For eye operations and refraction work, homatropine.

For eye inflammations, atropine.

For maladies attended with insomnia, neuralgia, nervousness, various kinds of nervous trembling (chorea, senile trembling, paralysis agitans, muscular agitation, and unrest), hyoscine or hyoscyamine.

For mental diseases of a depressing kind, melancholia, etc., puerperal mania, with or without albuminuria, duboisine, hyoscine, or hyoscyamine, but especially the first named.

For acute mania, paranoia, mental disorders with much muscular agitation and frequent and protracted muscular restlessness, hyoscine or duboisine.

Treatment of Typoid Fever by Perchloride of Iron.—T. W. Anderson, M.D., British Medical Journal, Dec. 12, 1891, says: This treatment consists in administering a full dose of the liq. ferri perchloridi fort., namely 5 minims (for an adult), every hour of the day and night, until a week has elapsed from the complete subsidence of the fever. To enable the patient to take this, the dose is combined with half a drachm of glycerin or one drachm of simple syrup, and a few drops of tinct. zingib. fort., and diluted in half a tumblerful of water. If sickness is caused, five grains of bismuthi subnit. are given ten minutes before each dose of the medicine until nausea ceases to be produced. In a few days the diarrhœa will be arrested, and thereafter a mild aperient must be given daily as long as the medicine is continued.

Arsenite of Copper for Influenza.—In the influenza epidemic of the past winter and early spring, of course I had my share of cases to treat. It presented itself to me as to other physicians, in all its protean forms, yet I was always careful to ascertain in each

case I treated whether the malady was confined in its most marked form to the nervous system, alimentary canal, or to the respiratory organs. In all cases in which the most prominent symptoms were of a nervous character, attended with severe headache, and also those in which the alimentary canal was most implicated, I found no medicine to act so promptly and well, and to which the entire system seemed so responsive, as the arsenite of copper.—J. B. Johnson, M.D., in the *Western Medical Reporter.*

Therapeutics of Chloranæmia.—The gastro-intestinal troubles of chloranæmia, as dilatation of the stomach, ancholorhydria or hypercholorhydria, and habitual constipation, have long been recognized and treated more or less wisely, up to the present time, by means of general intestinal antisepsis and the systematic administration of purgatives. In Nothnagel's clinic in Vienna, Dr. Pick reports the best results are obtained by lavage of the stomach, fasting. In other cases where this procedure is refused, he suggests the use of creosote, one gramme to be mixed with six of sugar of milk. This is then divided into twenty powders, of which one is taken three times a day.—*Medical Record.*

Inhalation for Whooping-cough.—Beall recommends, as an inhalation for the treatment of whooping-cough, the following mixture:

Thymol, 18 grains.
Carbolic acid, 3½ drachms.
Oil of sassafras, 2 drachms.
Oil of eucalyptus, 2 drachms.
Oil of turpentine, 2 drachms.
Oil of tar, 2 drachms.
Ether, 1 drachm.
Rectified spirit to 3 ounces.
Mix.

About 30 drops of this mixture are placed on a handkerchief, and the child made to inhale it. This application is to be repeated every two of three hours.

Rhus Aromatica in the Treatment of Incontinence of Urine.—In the Buffalo Medical and Surgical Journal, October, 1891, Dr. Wm. C. Krauss, of Buffalo, sums up his experience in nine cases as follows:

Incontinentia urinæ, due to slight disorders of the genito-urinary or nervous systems, is amenable to the rhus treatment, and gives most favorable results.

Incontinentia urinæ, due to destructive lesions of the spinal cord, complicating the vesical centre, or its reflex arc, is not amenable to the rhus treatment, and gives negative results.

A New Method of Performing Craniotomy.—Keppler has discarded the perforators usually employed, and uses instead a concave gouge or chisel. A chisel-forceps is also used, each blade of which is hollowed out and rendered concave. For extracting pieces of bone, a pair of forceps whose blades terminate in two sharp-edged rings was used; a catheter and funnel are employed for antiseptic irrigation. Keppler reports (Wiener medizinische Presse, 1891, No. 48) thirty-nine cases with a mortality of three.

A Snuff for Influenza.—The powder of the root of *Ligusticum levisticum* (lovage) has been highly recommended by several medical gentlemen as an antidote for the catarrhal and other symptoms of influenza. It is used as an impalpable powder of the root and snuffed as an ordinary sternutatory, allaying the distressing symptoms in a short while and placing the patient in a comfortable condition. The German variety of lovage is said to possess the qualities named.

Treatment of Whooping-Cough.—C. C. Edson, M. D., commends the use of fluid extract of *Castana Americana* (American chestnut), which he gives in doses of half a drachm every three hours. It can be combined with syrup of wild cherry or tolu. He has been able uniformly to relieve the acute symptoms of any stage in from six to ten days.

Inhalation for Asthma.—The following mixture, to be inhaled during an asthmatic attack, is of value:

Ether, ʒ j.
Oil of turpentine, ʒ iv.
Benzoic acid, ʒ iv.
Balsam of tolu, ʒ ij.
M.

Creosote in Influenza.—French journals recommend five-centigramme pills of creosote in rhinitis and laryngitis due to influenza. Twenty or thirty may be taken a day, as many as one hundred in six hours having been administered in a certain instance.

Medical Progress.

THE CAUSTIC TREATMENT OF CANCER.*—It is possible that pathological research may yet result in the discovery of an internal remedy for cancer, but an existing malignant tumor can never be entirely removed from living tissue without some active intervention by the physician or surgeon. We lay down the axiom, then, that cancer must not only be destroyed before a cure can be effected, but also in some way removed from the body to insure continued immunity from the disease.

Removal may be accomplished by operation or by escharotics. Up to the present time the tendency of the profession has been toward the surgical operation, to the exclusion of all other remedies, which we have been pleased to denominate "quack remedies."

The truth of the matter is that the surgeon who condemns the caustic treatment *in toto* is just as irrational in his judgment as the cancer quack who declares that all cancer can be cured without the knife, and by a painless process. Both parties are in error, and it is my purpose briefly to indicate the cases which are suitable for caustic treatment, and to describe the means employed. This paper is based upon three hundred cases occurring in my service in the New York Skin and Cancer Hospital and in private practice.

In this report no record is made of the treatment by mild cauterization, which I have heretofore condemned in a paper read before the New York Dermatological Society, and given what appeared to me a justification of the position. Among those which may be termed mild caustics are nitrate of silver, carbolic acid, pyrogallic acid, resorcin, and that South American extract of something which is called alveloz. None of the remedies of this class are true escharotics, but rather irritants. All fall far short of the one great requirement of a proper escharotic for cancer, viz., an agent which will produce rapid as well as complete destruction of the diseased tissue. All are liable to stimulate absorbents and so promote dissemination of the disease, and the only safe employment of them consists in discarding them altogether.

For the purpose of discussion the following division of cancer may be adopted: 1. Cancer of the breast (including carcinoma and sarcoma); tumors of the axillary and cervical glands; cancer of the vulva, of the testis, of the penis, and of the rectum. 2. Cancer of the cervical portion of the uterus, of the tongue, and of the tonsil. 3. Cutaneous cancer, including cancer of the lip and of the external ear.

All malignant diseases not included under these three heads are outside the province of this paper, as no advocate of treatment by caustics, however ardent his preferences, has ever attempted to employ such means in the treatment of disease of internal organs, of bone, of the thyroid gland, or even of the larynx or vagina, without regretting it afterward.

Before considering these classes in detail, it may be stated that no method of treatment should be employed which aims at anything short of complete destruction and removal of diseased tissue. The only possible exceptions to this rule are occasional instances in which a tongue may be removed to allow of increased facility in feeding, a tumor near the eye where the sight may be preserved, or where a pendulous or ulcerating tumor (as of the breast) may be rendered less painful or offensive for the time being by the removal of a portion of it. Such are palliative measures which may be justifiable, although life is not usually prolonged thereby.

The treatment of cancer of breast by caustics has often been recommended, even by physicians of good repute, while the cancer quack has, from time immemorial, secured both fortune and glowing testimonials of merit from this unfortunate class of patients. If the history of removal by operation of recurrent disease in my service at the hospital in such cases could be published, with the original testimonials of cure without the knife, it would prove an effective antidote for such insinuating and dangerous pretensions. I hazard the statement that no cancerous tumor of the mammary gland ever existed which was a proper case for the employment of caustic treatment. I do not deny that the tumor can be destroyed and removed by such applications as Marsden's paste, or Bougard's or Michel's paste (I have employed these means successfully), but the process requires several months, is painful in the extreme, crude in its execution, and, worse than all else, tends directly, through the chronic irritation of adjoining tissues, to disseminate the disease to other organs. Of the very small proportion where a cure has finally resulted from these procedures, a much more rapid and satisfactory result would have been secured by a surgical opera-

*Read before the Medical Society of the County of New York, January 23, 1892.

tion. No cancer of the breast should ever be treated without removing every lymphatic gland in the axilla of the side affected, and this cannot be accomplished by a plaster or a caustic of any description.

Mr. Charles Egerton Jennings, of London, in his admirable book on "Cancer and Its Complications," in speaking of cancer of the breast, uses these words: "When caustics are employed to destroy a cancerous growth of any considerable dimensions the results are far inferior to excision or amputation under modern conditions. The bulk of the growth is hardly ever eradicated, and manifest local recurrence occurs ordinarily after the lapse of a few weeks. The caustics are applied and reapplied, and this sad treatment goes on until the patient is relieved by death of a treatment which adds pain to that of the disease, which it ordinarily aggravates."

He makes an exception in favor of caustics in certain very old and debilitated patients, where there is an open ulcer, with the surrounding tissues adherent to the ribs, for the purpose of arresting offensive discharges for a while, and ends by recommending a preparation consisting of:

℞ Hydrochlorate of cocaine, 2. grammes.
Caustic potash, 6. grammes.
Vaseline, 8. grammes.

After the skin is well cleansed, small portions of this paste are well rubbed in with a wooden spatula, and in a few minutes considerable tissue can be bestroyed. It is not a painful application, and I have removed small growths on various parts of the body quite satisfactorily. The charred portions should be carefully wiped away with absorbent cotton during the application, to prevent destruction of adjoining healthy tissues.

Whatever arguments can be urged against caustics in breast cancer apply with increased force to disease in the axillary glands. The cicatrix resulting from such treatment resembles that of an ordinary burn, and not long since a patient applied to me after a tumor of the axilla had been removed by a celebrated "dealer in knifeless operations," and the contraction had firmly bound the arm to the side. I may add that the disease recurred in the cicatrix.

In the glands of the neck there is the added danger of destroying important organs, for only great familiarity with any caustic can enable us to predict the extent of its action to the requisite degree for the safety of the jugular vein or the facial artery. The instances of this class where caustics have been employed that have come under my notice are sad beyond description, and the only word to add concerning caustics in tumors of the neck is the most sweeping condemnation. The same may be said of tumors of the testis, which are likely to be cancerous and of rapid growth.

A small superficial tumor of the vulva may sometimes be removed by electrolysis or the Paquelin cautery, but my own experience and observation in these cases compel me to state that recurrence is usually rapid and certain, and the only reasonable hope of cure lies in an early and free incision. No time should be lost in the attempt to cure with caustics.

Dr. C. W. Allen recently presented to the New York Dermatological Society a patient with epithelioma of the glans penis, where Bougard's paste had been employed successfully, but the corpus spongiosum is so excessively prone to infiltration with cancer that amputation as near the pubis as possible appears the safer procedure. A radical cure of the penis by operation is not unusual, provided treatment is undertaken early in the progress of the disease. The caustic paste may be considered admissible provided the disease is confined to a small portion of the foreskin, if indeed that condition is ever met with in practice.

Of our second class—cancer of the cervical portion of the uterus, of the tongue and the tonsil—it will be noted that they are in a class by themselves, because the plasters, pastes, atc., cannot be used without poisoning the patient, and some form of the actual cautery is the only proper escharotic, should any be deemed advisable.

In regard to the cervix there is so much to be said that the limits of this paper forbid a thorough discussion of the subject. I believe, however, that of the considerable number of cases which I have observed in my own and my colleagues' practice, all are now dead with one exception, and she is not likely to long continue to break this dismal record of mortality. Many have been curetted thoroughly and afterward cauterized, and some arrests of symptoms secured, but all improvement was only temporary. Mr. John Williams gives his cases in admirable detail, and high amputation was no more satisfactory. Extirpation, in the cases where the woman survives the shock, is sometimes followed by recurrence in the peri-uterine cellular tissue, so that we are forced to the conclusion that cancer of the uterus is one of the most incurable of all the malignant diseases.

The spongy character of the tongue accounts for the extreme malignancy of disease therein and its consequent incurability.

Even the actual cautery is useless, and whether you amputate by Whitehead's or Kocher's method, or any other, a year of immunity is longer than I have ever secured, although Butlin reports six cases out of a total of seventy who remained cured after three years.

It may be said, in brief, concerning epithelioma of the tonsil (primary), that the removal thereof by cautery involves great danger from secondary hæmorrhage, while primary hæmorrhage is very liable to cause death when removal by operation is attempted, so that the only favorable comment to be made upon these cases is the extreme rarity of the disease, the entire number of reported cases being less than one hundred.

Concerning the third class, which comprises all cutaneous cancer, epithelioma of the lips and of the external ear, it may be said that they are the most curable of all varieties of cancer, and in this respect stand in sharp contrast with the class just considered. There is no reason why ninety-five per cent. should not be absolutely cured, if treated at the earliest period in the course of the disease. There need be no hesitation in giving the patient himself this prognosis, provided always that he will permit very frequent observation and prompt destruction of any epithelial growth.

Cutaneous cancer is usually treated more satisfactorily by escharotics than by any other method, and for various reasons. The patients are usually past middle age, and often far advanced in years, and, as a class, not good subjects for ætherization. The antipathy to a surgical operation often leads them to delay treatment until the pre-cancerous stage, as Mr. Jonathan Hutchinson has termed it, has been followed by one of active malignancy. You can always quite readily persuade them to have a plaster applied. The disease can be thoroughly destroyed by the caustic plasters, for they will all act sufficiently upon diseased tissue in so much less time than upon healthy skin that there is almost an excuse for the fallacy that they exercise a positive power of selection. The resulting cicatrix, when the deep subcutaneous tissues are not involved, is a very smooth, white, and in every way healthy one, far less conspicuous than after operation. The only cases in which an operation should be preferred to a caustic are those involving the mucous surface of the lip, the eyelids, and all others which have involved a large surface, so that dangerous poisoning might result from absorption.

The choice of a proper escharotic is of considerable importance. If the disease be a very small warty growth, the potassa and cocaine paste of Mr. Jennings is a good one. Acetic acid must be at hand to limit its action as soon as desired. Where the disease is that form of epithelioma called rodent ulcer by some and Jacob's ulcer by other authors, with little or no induration of the borders, a paste composed of lactic acid and silicic acid, in such proportions as to make a thick paste, is effectual in destroying the diseased surface. It has one advantage over others in that it is not poisonous, and can be spread over a large surface. It is less active than the others, and requires frequent repetition. I now very seldom employ it. The actual cautery is too painful, and patients are much frightened by the very appearance of the doctor armed with a red-hot instrument.

In 1874, in a paper before this Society, I described the method, then new, of applying an arsenical paste as recommended by Dr. Alexander Marsden, Surgeon-in-Chief of the London Cancer Hospital, and gave histories of 12 cases successfully treated by it. Since that time I have employed the same paste in over 100 cases. It is satisfactory in the main, and has become a well-recognized remedy throughout this country. In some cases the reaction is very great and the pain very severe, although less pain is experienced if cocaine is mixed with it. It is composed of arsenious paste, two parts; mucilage of acacia, one part; mix into a paste too thick to run. It is then applied to only one square inch of the ulcer, covered with cotton to absorb any superfluous paste, and left on until swelling occurs around it, with heat and redness, when it is removed, and a line of demarcation usually surrounds the surface cauterized. From one to three days are required to produce the desired effect. Warm poultices are then applied until the slough separates (usually about a week), when, if the disease is all removed, the healing process proceeds as in an ordinary granulating sore. The same process is to be repeated until the disease is all removed. Marsden insists that no cancer of more than four inches in extent should be thus treated, and only one square inch at a time, and the case very carefully watched. The surgeons of the London Hospital inform me that even Marsden himself seldom employs the paste. They have substituted an application called Bougard's paste, after the Belgian surgeon who first published the formula in his work on caustics. This author brought it forward as a cure for mammary cancer, but as such, in my judgment, it is open to the same objection as

all other caustics; but in cutaneous and lip cases, in fact all surface epitheliomata, where any escharotic is admissible, this is by all odds the best we have at present. It is less painful than Marsden's, forms a more dry and friable slough, can be safely applied to a larger surface, and can always be prepared and ready for instant use, for in a covered jar it will keep for many months. With both pastes the surface must be denuded, if necessary, by caustic potash to render the action prompt and effective in the shortest possible time. Bougard's formula is as follows:

Wheat flour, 60. grammes.
Starch, 60. grammes.
Arsenic, 1. gramme.
Cinnabar, 5. grammes.
Sal ammonia, 5. grammes.
Corrosive sublimate, 0.50 centigramme.
Solution of chloride of zinc at 52, 245.grammes.

The first six substances are separately ground and reduced to fine powder. They are then mixed in a mortar of glass or china, and the solution of chloride of zinc is slowly poured in while the contents are kept rapidly moved with the pestle so that no lumps shall be formed. A thick layer of this is spread on cotton and left in position twenty-four hours, and then managed in every way as Marsden's paste. Few cases require a second application. The ulcer may be dressed with balsam of Peru ointment of varying strengths, according to the stimulation required, and all exuberant granulations are to be kept in check by the usual methods. An excellent dressing, instead of the Peruvian balsam, is a five- or ten-per-cent. aristol ointment, with vaseline as a base. However, this after-treatment is not of vital importance except in one respect, viz., healing under a scab in cancer cases can never be trusted.—Dr. Daniel Lewis in *New York Medical Journal.*

MICROCOCCUS PNEUMONIÆ CROUPOSÆ.—Synonyms: *Microbe septicæmique de la salive* (Pasteur); *Coccus lancéolé* (Talamon); *Micrococcus Pasteuri* (Sternberg); *Pneumococcus of Fraenkel; Diplococcus pneumoniæ* (Weichselbaum); *Bacillus salivarius septicus* (Flügge); *Streptococcus lanceolatus Pasteuri* (Gamaléia).

The object of the present brief paper is to call attention to the earlier researches relating to the important pathogenic micrococcus to which it refers. This seems desirable at the present moment, inasmuch as the distinguished author of the Croonian Lectures, recently published in The Lancet, has given an account of the history of the micrococcus in question, in which he fails to recognize my priority in its discovery. He says:

"Its history is as follows: In 1881 M. Pasteur observed, to his surprise, in inoculating a rabbit with the saliva of a child affected with hydrophobia, that the animal died rapidly of septicæmia. Subsequently Dr. Sternberg, of Washington ('Der Mikrokok der Sputum-septikämie,' Deutsche Med. Wochenschrift, 1887, p. 44), having observed that the inoculation of pneumonic sputum induced in the rabbit symptoms similar to those observed by Pasteur ('Note sur une maladie nouvelle provoquée par la salive,' Bull. de l'Acad. de Médecine, 1881), repeated the experiment with his own saliva. As this animal also died of septicæmia, he was led to investigate the subject bacteriologically, and found that in all the animals inoculated the same microzyme occurred, and that it corresponded with Pasteur's description of the *Microbe septicæmique de la salive.*" (Quoted from the Lancet of November 28th, 1891, p. 1209).

Now, as a matter of fact and of record, the present writer discovered the micrococcus in question in the blood of rabbits inoculated with his own saliva, in the city of New Orleans, in September, 1880, three months before Pasteur discovered it (December, 1880) in the blood of animals inoculated with the saliva of a child that died of hydrophobia in one of the hospitals of Paris.

At the date referred to I was not able to follow up my experiments immediately, as I was engaged in another investigation. But they are recorded, with the date upon which they were made, in my special report to the National Board of Health, on "Experimental Investigations Relating to the Ætiology of the Malarial Fevers," which was submitted some time before the publication of Pasteur's note referred to by Dr. Burdon-Sanderson, and was published in the National Board of Health Bulletin, vol. iii, Washington, 1881–2.

Impressed with the surprising fact that my saliva contained a pathogenic micrococcus that quickly proved fatal to rabbits inoculated with the fluid containing it, I went to Philadelphia in January, 1881 (before the publication of Pasteur's first communication), for the express purpose of making further investigations with reference to this micrococcus in the laboratory of the Medical Department of the University of Pennsylvania.

Here eleven inoculation experiments demonstrated (*a*) that the virulence noted was not due to season or locality, as the same result followed inoculations made in Philadelphia during the winter months as had been obtained by similar inoculations in New Or-

leans during the heat of summer; (*b*) that this virulence was not an individual peculiarity, inasmuch as eleven rabbits inoculated with the saliva of six different persons gave eight deaths and three negative results.

In March, 1881 (still before the publication of Pasteur's first communication), I resumed my experiments in the biologic laboratory of Johns Hopkins University, Baltimore, and by the inoculation of pure cultures obtained from the blood of infected rabbits, proved that the fatal septicæmia induced in rabbits by inoculating them with my saliva was, beyond question, due to this particular micrococcus. I also determined many of its biologic characters, accurately described its morphology, and made photomicrographs showing it in the blood of an infected rabbit. The results of this investigation are published in my paper on "A Fatal Form of Septicæmia in the Rabbit, Produced by the Subcutaneous Injection of Human Saliva" (National Board of Health Bulletin, vol. ii, 1881; also Johns Hopkins University Stud. Biol. Lab., Baltimore, vol. ii, 1882, pp. 183–200, 1 pl.).

The publication of this paper was considerably delayed after I had completed my research, and in the meantime Pasteur had published his "Note sur une maladie nouvelle provoquée par la salive," referred to by Dr. Burdon-Sanderson.

My earlier researches were followed by others, in which I used this micrococcus as a test of the comparative value of various disinfecting agents,* and in the course of which I determined various points relating to its biologic characters.

In January, 1885, I made a series of experiments with pneumonic sputum, which led me to the identification of the oval coccus, usually in pairs, found in this material, with the micrococcus previously isolated from my own saliva. In the paper† in which I gave an account of these experiments I named the micrococcus in question *M. Pasteuri*—a name that has not been generally accepted, and for which I now propose to substitute the name placed at the head of this paper, *M. pneumoniæ crouposæ*. In my paper last referred to, which was read before the Pathological Society of Philadelphia in April, 1885, and published in the American Journal of the Medical Sciences for July of the same year, I say: "It seems extremely probable that this micrococcus is concerned in the ætiology of croupous pneumonia . . . . but this cannot be considered as definitely settled by the experiments which have thus far been made upon the lower animals."

Fraenkel's first paper* relating to the presence of this micrococcus in pneumonic exudate was published shortly after my paper last referred to.

Since the date last mentioned the extended researches of Fraenkel,† Weichselbaum,‡ Netter,§ Gamaléia,‖ G. and F. Klemperer,¶ and others, have established the fact that this micrococcus is the usual cause of croupous pneumonia.

Recognizing this, we propose hereafter to designate it *Micrococcus pneumoniæ crouposæ*. This corresponds with the nomenclature adopted by Flügge in describing other pathogenic bacteria—*e.g.*, *M. gonorrhœæ*, *B. typhi abdominalis*,' *Spirillum choleræ Asiaticæ*.

The name "diplococcus pneumoniæ," which has been adopted by most German bacteriologists, and following them by many English and American authors, is objectionable because this coccus is not truly a diplococcus, although commonly seen in pairs in preparations made from pneumonic exudate, or from the blood of an infected rabbit. But it is also frequently seen in short chains of three or four elements, and in cultures upon nutrient agar it often forms long chains. It is, therefore, more properly called a streptococcus. Gamaléia calls it *Streptococcus lanceolatus Pasteuri*. We prefer, however, the more general generic name, "micrococcus," and do not consider it necessary that the name should be descriptive of the mode of grouping of the cocci.

It may be questioned whether "diplococcus," as a generic name, is entitled to a place in our nomenclature. It simply represents a form of association that is common to all micrococci, although more persistent in some than in others, and which results from their multiplication by binary division. Now, some of the so-called diplococci multiply in one direction only, forming pairs, and longer or shorter chains, as in the case of the micrococcus under consideration: while

* "Experiments with Disinfectants," Johns Hopkins Univ. Stud. Biol. Lab., Baltimore, vol. ii, 1882, pp. 201–212.

"Induced Septicæmia in the Rabbit," Amer. Journ. Med. Sci., Phila., 1882, pp. 69–76.

"Germicide Value of Therapeutic Agents," Amer. Journ. Med. Sci., Phila., 1883, pp. 321–343.

† Paper published in the Transactions of the Pathological Society of Philadelphia, vol. xii, 1885; and in the Amer. Journ. Med. Sci., July, 1885.

* "Bacteriologische Mittheilhungen," Verhandl. d. Vereins f. Innere Med., July 13, 1885.

† Zeitschr. f. Klin. Med., Bd. xi, 1886.

‡ Ibid., Bd. x, 1886.

§ Comptes Rend. Soc. de Biol., Paris, Nov. 4, 1887.

‖ Ann. de l'Institut Pasteur., t. ii, 1888.

¶ Berl. Klin. Wochenschr., 1891, Nos. 34 and 35.

others multiply in two directions, forming pairs and, by transverse division, groups of four—*e. g.*, *Diplococcus citreus conglomeratus* (Bumm), *Diplococcus roseus* (Bumm). Thus a most important generic character—division in one or two directions—is ignored by those bacteriologists that use the term diplococcus as a generic appellation.

Again, some of the micrococci commonly described under the generic name "streptococcus" are seen, under certain circumstances, only, or chiefly, associated in pairs.

We object, then, to the use of the term "diplococcus," as a generic name for microorganisms of this class, as being unscientific and misleading.—George M. Sternberg, M.D., in *Medical News*, Feb. 6, 1892.

A New, Safe, and Sure Method to Expedite Difficult Cases of Labor.—Dr. Playfair, F.R.C.P., Professor of Obstetrics of King's College, London, writes recently of an "entirely modern oxytocic by manual pressure applied directly to the uterus to increase the force of feeble pains, etc." *

It is something like ten years since I commenced the use of the herein-described method † of expediting difficult and retarded cases of labor with pelvic or breech presentations. I have made use of the same method in difficult labors with vertex presentations, since that time, when the presentation was a safe one and (from any cause) the expulsive pains of the patient were inadequate for the delivery of the child.

I well remember the teachings of our professor in obstetrics, Dr. Dix Crosby, of Dartmouth College, who was pre-eminently a practical man, who said that having made out the presentation, as a general rule, we were to wait patiently; we were not to use the blunt hook; we were not to get our finger into the flexure of the joint, at the groin; but we were to wait; nature would eventually accomplish the delivery. I had had a few cases of labor with breech presentations, and followed these eminently practical directions, and all went well. In the following case they did not work as satisfactorily.

Mrs. G., a closely-built, vigorous young woman, weighing 135 lbs., of sanguine temperament and florid complexion, was taken in her first labor in the afternoon. The night wore away — the following day, the next night, another day, to the third night. Up to this time, everything being natural, the parts cool and moist, the presentation having been early made out, we had kept her courage and hope sustained by telling her that as long as she remained cool, the pulse and temperature natural, the parts moist, there was no cause for anxiety or alarm, and that all would eventually come out right. During the evening the pains increased in strength and duration. The patient became excited at the delay, and called for ether and the instruments, and later in the night begged piteously for them. I finally gave her ether at the commencement of each pain, and while it continued. While giving the ether, in her writhing she got crosswise on the bed, with her head towards the wall. I gave the towel cone, by means of which the ether was given, to the nurse, and, placing my hands well spread out over the fundus of the womb, I applied a gentle and continuous pressure in downward and backward pressure, while the pains were on, upon the womb and contents, in the line of the axis of the pelvis. When the pains ceased I stopped the pressure. As the patient made no complaint, I continued applying the force, gradually increasing it at at each pain. After an hour or so, on making examination I found that she was making progress, and the breech was engaging. I continued the application of this force; and after about three hours more of hard labor, on the part of the patient and myself, I had the satisfaction of knowing that the labor would terminate successfully. Meanwhile, however, the husband and friends had become panic-stricken (in spite of my assuring them that all was going on well), and desired counsel. I assented. While the husband was after the counsel, I gradually increased the force applied until it was all I was capable of exerting with my hands, as before described, upon the abdomen of the patient.

After the breech had passed the upper strait she made more rapid progress; and at the proper time, when the breech began to be delivered, I passed to the other side of the bed and rendered the necessary assistance and delivered her safely of an eleven-pound girl, before the return of the husband with the counsel.

As this was the first time of my applying force in this manner, I felt not a little anxious as to the result, although I had reasoned that if the force was properly applied, and in the right direction, no harm could be done to the patient. I have to say, however, that she did not complain of any unusual tenderness of the abdomen, and she made as quick and perfect a recovery as any patient I ever had.

I searched the authorities for any description of the application of force applied in

* Braithwaite's Retrospect, Part cii. January, 1891, page 200, first two paragraphs.

† Read before the Boston Gynæcological Society, 1884.

this manner, to expedite labor, and have thus far failed to find any mention or hint of its ever having been before so applied.

From that time to the present I have made use of this method, and have at times applied so much force as to be apprehensive lest some harm might come to the patient; but in every instance the patients have made speedy and perfectly satisfactory recoveries. From the experience I have had in the use of this method, I am satisfied that it is a safe, sure, and satisfactory help in the delivery of difficult and retarded cases of labor, with either breech or vertex presentations.

Briefly, the method consists in applying a force synchronously with the natural labor pains, by and through the hands of the obstetrician, so spread as to embrace as large a portion of the fundus of the womb as may be possible, and applied downwards and backwards in the direction of the axis of the pelvis.

The following are directions which should be remembered and followed in making use of this method:

1. As to the position of the patient. It can best be made use of when the patient is crosswise on the bed, in nearly the same position as when the forceps are to be applied.

2. The hands of the obstetrician should be so spread as to embrace as large a portion of the fundus of the womb as possible.

3. The force should be applied when the pain commences, gently at first, gradually increasing it to the end of the pain, and should cease with the pain.

4. The force must be applied downwards and backwards in the direction of the axis of the pelvis.

Finally, certain precautions should be borne in mind in the use of this method:

1. It should not be used unless the presentation is a safe or deliverable one.

2. It should not be applied spasmodically by jerks, but with a gentle, gradually increasing pressure.

3. It should not be used unless the os uteri is dilated or dilatable.

Following the above directions, and bearing in mind the cautions given, this method will, I am sure, be found of great value in difficult and retarded cases of labor, and, for the average general practitioner, safer than the forceps.—Marshall L. Brown, M.D., in Boston *Medical and Surgical Journal*, Feb. 4th, 1892.

On the Treatment of Anæmia.—James F. Goodhart, M.D., F.R.C.P., in the American Journal of the Medical Sciences, summarizes his conclusions on this subject as follows:

First, absolute rest in bed for ten days or a fortnight—three weeks is none too much for some cases—and they should not be allowed to take much exercise of any kind for the six weeks that their treatment lasts.

Secondly, they must be fed with good, wholesome food—four meals a day—beginning with milk and egg, which can be taken in the fluid state and thus stowed away almost regardless of appetite. Good meat and vegetables can soon be added, and each meal should see some addition until a reasonable quantity is taken.

Thirdly comes the iron, as already detailed; and

Fourthly, any mild aperient that may be necessary.

It is not my purpose to advert to the dangers that attach to the anæmic state. Whether they are few or many, it cannot be that this disease is an unimportant one, although it is so common and so generally remediable that one might well think it so. Unfortunately, it is so very common that the public have no idea of its importance as a disease, and therefore it requires some courage to send a patient to bed for a fortnight and to prescribe a Lent where physic shall replace the accustomed fasting.

But, as I am dealing with the point of curability of these cases, I should like to say that I have several times seen it stated that, in distinguishing between pernicious and this form of anæmia, the pernicious form tends to relapse; the chlorotic form, not. This has not been my experience; quite the contrary. These cases frequently relapse after a time, and it is necessary to tell them that it will be so, and that at the first indication of pallor or breathlessness, or, it may be, amenorrhœa, they must return to their remedy for a short course of three weeks or so. It is a curious disease and has, I believe, a large nervous element in its production; but this I feel sure of, that, by its obstinacy and its tendency to relapse, it betokens a rather important constitutional vice, and that it is not a mere intercurrent affection that is treated and done with.

The Parturient Woman's Bed.—By a little attention on the part of the physician to the preparation of the bed, many of the annoyances and dangers incident to parturition can be removed.

Commence with a good, firm mattress; eschew feathers. Cover the mattress, if you please, with a rubber sheet, and over it spread

the cloth sheet. Have the patient wear, in lieu of a night-gown, a short sack scarcely reaching the hips. After she takes her bed, place under her hips a pad of absorbent cotton, covered with cheese-cloth, about thirty inches square and one inch thick. Place a similar pad, folded, under the small of the back and resting upon the upper margin of the first pad.

The pad under the hips will absorb all the fluids incident to labor, while the one under the back will prevent fluid creeping up to the patient's shoulders. After labor, withdraw the pads. With them will come all the fluids, and the patient, with no annoyance or trouble, finds herself in a clean and dry bed. Now place a pad eighteen inches square under the hips and one two inches in diameter and seven or eight inches long against the vulva, to absorb subsequent discharges. Burn the soiled pads; they are cheap. Pads or accouchment sheets can be purchased of the Hygiene Wood Wool Co., ready made, as can the vulvar pads. The vulvar pads should be changed as soon as they become soiled. The large pad placed under the hips after delivery can remain for from twelve to twenty-four hours, after which time the vulvar pads will be sufficient to absorb all discharge.

In referring to the efficacy of these pads and sheets, Dr. Geo. H. Rohe, Director of the Maryland Maternité, in a recent communication says:

"The confinement pads were found to absorb all the discharges without allowing any fluids to pass through to stain or even moisten the sheet underneath. Of course it is possible that in some cases, where the liquor amnii is in excess, the pad would not absorb it all, but no such case occurred among those with whom the test was made. The menstrual pads were used as vulvar pads after delivery. For the first two or three days the discharge rapidly saturated the pads, so that frequent renewals were necessary. After the third day, however, these pads answered admirably to absorb the lochial discharge. I would suggest that a slightly wider and longer pad than the menstrual pad be made, to be used as a vulvar pad after delivery. This, it seems to me, would help along the cause of antiseptic midwifery, as any old rags are usually thought to be good enough to be used as vulvar pads."—*American Gynæcological Journal*, February, 1892.

Hot Vaginal Douches.—That vaginal douches of hot water are capable of doing great good in pelvic inflammations and uterine hæmorrhages has been a matter of common observation among those who have had much experience in their use. But unfortunately they are frequently given in a way that results in no benefit, but, on the contrary, disgusts the patient and oftentimes aggravates the disease. The physician too frequently advises the use of injections of hot water without giving the necessary instructions regarding the proper way to apply it so as to receive the good effects intended. The patient is not instructed as to the degree of heat, the mode in which the injections are to be applied, the quantity of water to be used, the position in which she should lie, or the kind of syringe necessary. When the patient is left to work these problems out for herself she will usually use tepid instead of hot water; a common intermittent flow syringe, like the Davidson; will place herself in the squatting position while using it, and the quantity of water used will fall far short of that necessary to effect the results expected.

In order that the patient may be benefited from the use of hot water injections, they should be applied in the following way:

1. The patient should be instructed to procure a fountain syringe, the capacity of which is at least one gallon.

2. She is instructed to use the water as hot as can be borne.

3. In taking the injections she should lie on a flat surface in Sims' position.

4. The height of the syringe should be such as to give the water only a moderate force.

5. The injection should be continued for at least ten or fifteen minutes, sometimes for a much longer time, depending upon the degree of comfort experienced by the patient. —*Indiana Medical Journal.*

Don'ts in Treating Influenza.—Don't lose your wits and get to striking out wildly, but weigh well the conditions, and prescribe only with a definite end in view.

Don't be carried away by popular fancies and give one drug for everything.

Don't go in with the determination to "knock it." This species of insanity is very prevalent just now.

Don't overdose. The system of an influenza patient is highly susceptible to drugs of all kinds.

Don't give heavy doses of sedatives. The influenza is itself debilitating.

Don't give too much heart tonic. You may kill your patients thereby.

Don't forget that other diseases may be present during an influenza epidemic.

Don't forget that during an influenza epidemic its imprint is on every other disease.

Don't allow your patients to eat too little or too much.

Don't allow your patients too much alcohol.

Don't allow your patrons to dose themselves for any minor ailment during influenza.

Don't let your patients return to their business too soon.

Don't order more medicine than enough to last until your next visit. You will likely desire to change it, and it weakens the patient's confidence to see a medicine stopped when only partly used. It looks like indecision on your part.

Don't neglect the careful nutrition of your patient.

Don't let go your hold on your patient too quickly. Relapses and troublesome sequelæ, over-exertion and consequent collapse, are apt to follow.

Don't forget that a steady and persistent sustaining medication, carefully regulated by the effect on the heart, with the treatment of local symptoms, forms the only rational treatment of influenza.—*Philadelphia Times and Register.*

A NEW METHOD OF TREATING DIPHTHERIA.—In the Practitioner for 1891, No. 282, p. 430, is found a very instructive paper by Dr. C. Smith, based upon the observation of seventeen cases. His treatment consists in the continuous inhalation of a vapor composed of a mixture of carbolic acid, eucalyptus oil, and turpentine, until the patient is well, and at the same time support to the heart by stimulants, as well as tincture of digitalis, tincture of belladonna, and aromatic spirits of ammonia. The method of application is claimed to be new. Place the patient in bed—first, to facilitate the inhalation; secondly, by retention of the horizontal position to spare the heart. Fix a tent over the patient by arranging a sheet, which should not be too large, but should be closed in on every side, except in front of his face, so that he can look about, be readily watched, and receive a supply of fresh air. The ingredients are: Carbolic acid, 1 part; eucalyptus oil, 1 part; turpentine, from 8 parts to 4, if stronger preparation is desired. Use steam continuously in the cot; soak two cloths about a foot square in the mixture, place one close to the face, the other on the pillow near the head. For adults, one or two other cloths may be hung about the cot. These cloths must not touch the face, and should be kept continually moistened. Breathing must be done through the mouth. The acid preferred is Calvert No. 2, which is pleasant and causes less discomfort. If the stronger preparation is used, to combat the depression of the heart use brandy in full doses or the drugs mentioned above. Steam must be always used in laryngeal cases. Further disinfection of the room is not necessary. Sometimes mercurial ointment can be freely applied to the skin of the neck and throat with benefit, and occasionally he used borax in the manner recommended by Hood, a small quantity being put in the mouth every half-hour, by day and night, for several days.

HYDRASTININ IN UTERINE HÆMORRHAGES.—Czempin (Centralblatt für Gynäkologie, No. 45, 1891) uses the hydrochlorate of hydrastinin in doses of a quarter of a grain four times daily, usually administering it during the first two or three days of the menstrual flow. In cases of uterine fibromyoma it is advisable to give the drug a few days before the flow begins.

Fifty-two cases are reported, good results being obtained in twelve cases of menorrhagia due to disease of the adnexa. In 20 cases of chronic endometritis the result was very good in 13, and fair in six—that is, the hæmorrhage ceased within from twenty-four to thirty-six hours after the exhibition of the drug.

The result in 4 cases of fibro-myoma was negative. Profuse menstruation following confinement was treated successfully, but hæmorrhage after abortion was not affected. Menorrhagia in virgins from uterine congestion was relieved in about one-half of the cases. In general, in over 50 per cent. of the whole number of cases the hæmostatic action of the drug was marked. It doubtless contracts the blood-vessels of the endometrium, and hence is not to be compared with ergot, which causes contraction of the muscular fibres of the uterus, and hence is more efficient when the organ is in a state of relaxation. On the other hand, hydrastinin is a valuable remedy in all cases in which congestion of the normal mucosa is due to functional disturbances of the ovaries (as in virgins and women at the climacteric) or to disease of the adnexa, as well as in menorrhagia dependent upon hyperplastic endometritis. However, it is uncertain in its action, and may have no effect whatever.

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Original Articles.

PROFESSIONAL ETHICS.*

ADDRESS BY HON. W. H. H. RUSSELL, B.L.

Standing once with a learned judge and a skillful surgeon in the dissecting-room of a great medical college, witnessing the dissection of the brain of a splendid specimen of humanity, who had died only a few days previous, the thought occurred to me that every conscientious and learned surgeon should believe in the existence of a Supreme Being, because such an organization could not possibly have evoluted from a protoplasm. And so to-night, standing in this forum, before medical students, in response to the invitation to address them before their graduation, I feel it indeed a compliment worthy of an inspirational effort. And were it not for the flood-tide of political eloquence which we have had in this community, as a State and City, within the last forty-eight hours, from a distinguished ex-President of the United States and the ambitious leaders of a great party, I might indulge in some thoughts upon the science of government; but I shall be content to keep within the limits of professional decorum, and discourse only upon a subject entirely appropriate to the occasion.

In the sunny, sultry days of a midsummer month, 1880, your speaker, with a party of scientists, behind the iron horse of progress, sped across the great plains, toward the rugged backbone of the continent, the majestic Rocky Mountains. The iron rails of the great Pacific Railroad had not yet been laid over the brow of those mighty bulwarks of nature, and the Mississippi Valley was yet supreme in its mountain-bound fastness upon the western border. On the second day out from Kansas City we were midway across that vast area of barren country, which at one time must have been the bed of a great inland sea. Not a tree, no foliage, not even a blade of grass could be seen for miles and miles around. Here and there a group of comic prairie dogs stood erect upon their hind legs, like so many sentinels, guarding their homes in the sunburnt earth. Now and then the wild gazelle and antelope loped away like the fleeting shadows of a prehistoric past, and occasionally a rude clump of sage-brush marked the bleached bones of the huge buffalo, the former monarch of the trails. A semi-tropic sameness was upon the face of the earth, and the scorching orb of day went down, bathed, as it were, in sands of gold. Ah, what a change greeted our vision in the afternoon of the third day! To the west, the glorious west, as far as the eye could reach, we caught the first glimpse of that mighty range of eternal mountains, seemingly belting the very skies from the ice-fields of Alaska to the land of the Montezumas. We were yet one hundred miles away; the sky was as cloudless as a sylvan night, and the lurid sun seemed to pause that we might behold the lofty peaks shimmering in the golden beams in all their splendor; and there, far up on the graceful outlines of one of the boldest slopes, the "Mount of the Holy Cross," we beheld the beautiful symbol of all Christendom, *a great white cross*, composed of never-melting crystal snows, set, as it were, in a granite peak of the grand old mountains. There it stood, significant and symbolic to all tourists who might wish to cross the continent. It was one of the most sublime pictures and inspirational scenes in the broad domain of Nature that it has been my good fortune to behold. And I was forcibly reminded of the eloquent peroration of the devoted pastor who, when preaching a farewell sermon to his congregation, said in conclusion, as some of the devout members

*Delivered before the senior class of the Michigan College of Medicine and Surgery, Detroit, February 24th, 1892.

were weeping: "Remember, my hearers, that the Infinite Architect, who called the celestial bodies from the boundless realms of space, fashioned the smallest particle upon this earth; remember that the Supreme Creator, who designed the mighty mountains, inlaid them with gold and silver; but, above all, my good friends, remember that the great God that made me made a *daisy*."

Sunday morning, the first day of August, eighteen of the party set out on horseback and bronchos for the ascent of Pike's Peak. There was sunshine in the valley, and the first portion of the journey was delightful, but as we wound our way around the rugged slopes we encountered, first, rain, then, higher up, hail, and then, above the vegetation line, snow. When at last six of us succeeded in reaching the top we felt more than repaid for the effort.

There we were, frail specks of humanity, 14,200 feet above the level of the sea, and, as far as the eye could reach (for we were above the fleeting clouds), it was like one grand panorama of majestic heights covered with perpetual snows, reaching up and up, like so many Parian marble spires of the world's greatest cathedral, until at last the pinnacles seemed to pierce the very skies. It was indeed the sublimity of earthly grandeur and solitude itself, and forcibly impressed one with the insignificance of mortal man when brought in contrast with Nature's grandest efforts. And yet those mighty monitors of the Great West were all cold and pulseless, and from a serio-medical standpoint, for the purpose of diagnosis, prognosis, and vivisection, they were not by far as valuable to the student of medicine as the Irishman and Frenchman who once lost their way out there, while prospecting for gold and silver, and the anecdote of their frontier mining life happily illustrates to a certain extent the necessity, in the medical profession at least, of the existence of what is known as Professional Ethics. Pat and Monsieur Frenchman were companions and partners in their rugged and mountainous pursuits. They had traveled for many days without luck, and their supply of food was exhausted. They were about to give up in despair, when lo! as the coyotes began to bark and the monarch of the day was fast sinking behind the lofty crags and peaks, here and there scattering sunbeams along the far winding valley, they saw the faint outlines of a rude shanty in the distance. They immediately revived their lagging hopes, took new courage, hurried on, and expected to find some one inhabiting the silent retreat, when, to their great dismay as they reached the door, the only vestige of animation they saw was a small, lonely, famished chicken. Surely it would not make a meal for both, and they were at a loss to determine how they could arrange it, so that either one should have it without a quarrel. They cudgeled their brains for some time, when Pat suggested that they draw cuts, and the one having the longest cut should have the chicken. The wary Frenchman feared that his good-natured friend might get the best of it, and suggested to Pat the idea that they should catch the chicken, kill, and dress it, and then go to sleep for the night, and in the morning the one who had had the most beautiful dream should have the chicken. Pat knew the Frenchman was very tired and would sleep very soundly, and that while he was asleep he might get up and eat the chicken, and so replied to the Frenchman: "And foith and begorra, that's a foine idea, and your good and patient soul should find sweet repose in purgatory for the happy thought." So they caught the chicken, dressed it, and laid down upon the earth in the shanty to sleep. The Frenchman was soon in the land of dreams, and Pat, with his weather eye open, quietly arose and feasted on the chicken. Early in the morning, when the birds were chanting their sweetest carols in the valley, and the sunbeams began to kiss the lofty mountain-tops, the Frenchman awoke, and, reaching over, shook Pat, and with the greatest delight in the world exclaimed: "Monsieur, Monsieur, I had ze most beautiful dream in ze world, ze magnific dream." Pat, rubbing his eyes as if slow to wake, said: "And foith, what wuz your dream?" The Frenchman in great ecstacy replied: "Monsieur, I had ze most beautiful dream in all my life. I dreamed that ze beautiful angels come down from ze clouds and ze angels escort me up to ze heavens. Bygar, sir, ze magnific dream." Pat with apparent astonishment looked at him in

wonder, and said: "And begorra, wuz that your dream? That wuz a foine dream, and begorra, I saw you going up, and I thought you wouldn't come back, and so I got up and ate up the chicken."

This humorous incident is given as a mere illustration of what you may sometimes expect from sharp practitioners, in the great contest and competition of successful professional life.

Professional ethics is that recognition and protection of true professional merits which should characterize every honorable man who studies and practices the great science of medicine, *as a profession*, and not as a trade. In other words, it is that science of duty established and recognized in a system of principles and rules, governing all regularly licensed physicians and surgeons, and enforced and respected by honorable Societies and Associations composed of high-minded and cultured gentlemen. A recognized standard of professional honor and ability, so sacred and inviolate that no graduate or regular practitioner will ever presume or dare to violate it. In truth and fact, no man should ever be permitted to practice medicine who is not a gentleman, and well qualified for the duties of that great profession.

In one of the morning papers, Sunday, the 14th inst., under the caption "Physicians' Success," there appeared an article by one of the most successful practitioners in New York City, and I quote his language as a part of my address, and as worthy of consideration. He said: "One who is going to enter the medical profession should bear in mind that the training he will receive at the medical college is only the groundwork of his education. There is all the difference in the world between the study of medicine and its practice. When the average medical student leaves college, he thinks he has mastered his profession; when he enters upon *real* work, he is amazed at how little he does know."

And yet a prominent physician of Detroit was reported in one of the daily papers of the 15th as saying to a reporter: "Do you know, young man, that you can begin the practice of medicine in this State at almost any time?" The astonished reporter said: "No, sir, I didn't know it." The responsible and learned physician then went on to say: "Well, you have only to tell a lie and pay 25 cents to obtain legal permission to hang out your shingle as M. D. The laws of Michigan upon the subject have brought to this State about 3,500 quacks, and while none of the regularly graduated physicians are infallible, the work done by these ignorant fellows is at times simply outrageous." The reporter then asked: "How is permission to practice obtained, Doctor?" And this was the reply: "Well, if you were not known at the County Clerk's office you could go there and the following conversation might take place: 'I want to register as a physician.' 'Very well, what is your name?' 'Dr. James Crow.' 'Have you graduated?' 'No, sir.' 'From whom do you get your diploma?' 'From God.' 'Very well; 25 cents please. Here is your permit.'"

Is it possible that such a state of affairs exists? And, if so, what a sacrilege upon the name of the Infinite Creator, who, it is said in the Good Book, made and fashioned man after His own image, as the master-piece of all His handiwork! How we should pity the poor unfortunate ones of humanity who perchance may be lingering upon a sick-couch, and may become the patients of such human hyenas! Can it be that in the great State of Michigan, famous for her University, her public schools, and her splendid system of education, such incompetent and unscrupulous *vampires* on the human family can obtain a license in such a manner? The honorable members of the profession and the good citizens throughout the State can overcome this glaring evil, if they properly set about it. There should be a State Board of Medical Examiners, created by law, composed of skillful and competent physicians and surgeons, in this and every State of the Union, and no person should be licensed or permitted to practice medicine or surgery as a general practitioner who cannot pass a thorough and complete examination, and no *specialist* should be allowed to advertise himself as such, or practice as such, without first having shown a superior knowlege, skill, and qualification in the particular branch he might wish to follow. And even more, druggists should not be permitted to deal out or

sell any poisonous medicine or drugs, except upon the prescription of a regular physician, and not even then, unless the druggist and his assistant possess all the qualifications necessary for such a hazardous business, and it would, indeed, be a blessing to every community if the old-time system prevailed; that is, that no medicines should be dealt out or sold except by the physician in his own laboratory.

It is the increase of drug stores and the unrestricted and unlimited sale of poisonous drugs and quackery compounds that are playing mischief in many of the homes of our country. The true *ethics* of the *profession should* and *could* overcome all of these evils, by a united and determined effort on the part of all honorable men in the profession to elevate the standard of professional attainment and practice. With first-class medical colleges, societies, and associations in every State and city, the people can be educated to believe that the science of medicine is truly one of the most important and noblest of arts. Medical colleges should be established and patronized not merely for the purpose of making money and turning out quasi M.D.'s, with parchments called diplomas, but rather for the nobler and more exalted purpose of educating and qualifying true gentlemen for the most sacred of all earthly callings; for theirs is the saving and prolonging of human life, and the amelioration of the ills and woes of the unfortunate and afflicted. Medical societies should be organized and maintained by the cheerful and hearty co-operation of all true and broad-minded practitioners, for the discussion of new and important discoveries and theories, and the cultivation of that fraternal spirit and feeling which should actuate and characterize the humblest and most exalted of human intellects. Ralph Waldo Emerson once said in an eloquent lecture to the young men of this city: "Young man, hitch your wagon to a star." And such should be the aim and purpose of all young men in entering the learned professions. True professional *ethics* will surely inspire the young and the old, in the humbler and higher walks of the profession, to the noblest deeds and achievements of heroic manhood.

The marvelous anatomy of the human system and the development and progress of surgery should inspire every member of your profession to study, study, study, diligent research and study. The laboratory and dissecting rooms should never be deserted or abandoned. I once met that incomparable and phenomenal genius, Thomas Edison, at Saratoga, a year or so before he completed his wonderful light (far more marvelous than the "Aladdin Lamp"), and he said that after the Association adjourned (the American Association for the Advancement of Science) he should go back to Menlo Park and remain there in his laboratory until his lamp was finished. He did so, and worked continuously for months, averaging 19 hours a day; and a few years ago the scientific world awoke to the realization that one of the most subtle and powerful elements in Nature's great domain could be brought into beautiful subjection, and sent radiating through the cities and into the homes of our broad country; that the human voice could be thrown in radiating circles along the electric wire for miles and miles away, and that the sweetest notes of music could be caught on plastic coils, retained, and transmitted to future generations. Professors Paschal and Koch faithfully and quietly worked for months and years, in their laboratories, with the microscope and scalpel, and when at last they revealed the fruits of their investigation and discoveries, the news was flashed around the world, and the afflicted and unfortunate in every clime chant their never-ending praise and glory. It will pay in the end, young gentlemen, to be diligent and faithful in your profession. Many centuries ago a learned and profound philosopher, commenting on the complex phases of human anatomy, exclaimed:

"Know then thyself; presume not God to scan;
The proper study of mankind is man."

In the practice of your profession you must study your fellow-beings in the noonday sunlight of all progressive thought and research, and with the aim and view of relieving distressed and afflicted humanity. And here let us pause a moment, and contemplate the fact that it is your especial privilege to diagnose and study woman, and surely she is the most complex and delicate

of all earthly beings. She was, according to the Good Book, the finishing touch of Creation, the last handiwork of the Creator upon the face of this earth, and what she will be in the world to come must be left for the angels alone to say. Ah, what a glorious piece of mechanism and anatomy is woman! The poets of every age and generation have sung her praise and glory, the greatest sculptors in classic art have sought to imitate her incomparable figure, sweetness, and beauty, and the wonderful achievements in Grecian civilization were at best but cold and pulseless marble. Scotland's gifted poet from the Highlands of his native heath sweetly wrote:

" The golden hours on angel wings
Flew o'er me and my deary;
For dear to me, as life and light,
Was my sweet Highland Mary."

And yet you must remember, gentlemen, that his Satanic Majesty found her in the beautiful bowers of Eden, fresh from the infinite touch of the Creator, an easy victim to the tempting serpent's apple. As soon as you can afford it, and can properly support a wife, young gentlemen, get married, for you will often be more sorely tempted than the dark, imperious ruler of Dante's " Inferno," and you may find that

" Pleasures are like poppies spread,
You seize the flower, its bloom is shed;
Or like the snow-fall in the river,
A moment white, then melts forever."

You will find that your pathway will not always be along peaceful meadows and clear winding rivers, that you must encounter the rough and rugged boulders of almost insurmountable barriers. No one, as the world goes to-day, can achieve success without heroic effort, and even the accumulation and possession of wealth will not make you great physicians, and, in fact, the love for gold and the greed of gain will contract and chill your nobler impulses. The world's grand achievements in the bright domain of science and literature have not been attained by the coffers of wealth. Noble and lofty genius seems to have been the child through all the ages of struggling mediocrity. Independent fortune is, indeed, most desirable, but when its accumulation is the sole ambition of life, then it often becomes oppressive and destructive of the best civilization of nations. Your journey in professional life must necessarily, to a certain extent, be on and over the broad fields of degenerate and wasting humanity. You must, therefore, come in direct contact with the lame, the sick, the halt, and the blind. You must visit the bedside of all classes, stations, and conditions of life, from the languishing couch of the fading cyprian to the most elegant boudoir of the palatial home. You must look into the wan, pale, and haggard face of that wayward, wanton wreck of society, with even more sympathy, and give to her the same kind, patient attention that you would to the most chaste and beautiful, remembering always the example of the meek and lowly Nazarene, of whom the Great Napoleon said upon his deathbed to his favorite biographer: " Hannibal, Cæsar, and Napoleon waded through seas of blood to gratify their ambition, but if I could live in the ages to come like the One who walked along the shores of Gallilee, with sandals on His feet, teaching the rude fishermen how to live, I would be content to die." You will all be called into the sacred chamber of the fond and loving mother, of sweet and peaceful homes, and entrusted with the safety and lives of mother and offspring. Ah! how noble is your calling, and, as good physicians, how great your responsibilities!

On the banks of the Ganges River, in the far-away lands of the Orient, there was erected the most beautiful building in the world. It was not built as a palace for a king and his vassals, for the festive scenes of banquets and royalty, but there it stands, of pure white marble, erected by Jhan in the 16th century, as an appropriate monument to his pure and noble wife, who consecrated her life in the supremest realization of motherhood. You must remember that the good and true physician is the confidant of the most sacred rights and trusts of home and family. At the domestic fireside you will always be a welcome visitor, if you are kind and faithful in the discharge of your duties, and your presence there will always be as a genial ray of sunshine in the bright and glorious morn of the lovely spring-time, as it kisses the sparkling dew-drops on the fragrant flowers.

Of course, I do not mean by this that you should kiss your patients, for that would often be embarrassing and dangerous, and the simile is given only as an illustration of what you may be to the devoted husband, wife, and children of a happy home. As you enter the sick-room you should always wear upon your face the cheer and smile of a most hopeful greeting, and unless you possess the nobler instincts and emotions of true and exalted manhood, that should always make your presence in the home as the attending physician most welcome, you had better become a floor-walker or ward-nurse in some well established hospital, or even an apothecary, well qualified for a laboratory of chemicals and compounds. It is a great mistake for men to believe that they can become successful practitioners and good physicians by merely getting a book-knowledge of medicine and a diploma or even a year or two in the clinics. There are some beings so constituted that their very presence is repulsive to sensitive and delicate natures, and you should always enter the sick-room with the greatest consideration and care for the afflicted, and receive your patients at your office with the most courteous and affable salutations. In France the young graduate in medicine is always spoken of as "licensed to kill." In Spain it is a common saying: "If you have a friend who is a doctor, take off your hat to him and send him to the house of your enemy." A humorous writer observes: "When a man dies suddenly without having been attended by a doctor, the coroner has to be called in, and an inquest held to ascertain the cause of death; but when he dies after having been attended by a doctor, then everybody knows why he died." The faithful nurse at a hospital once said in making her morning report to the attending physician: "Six of the fever patients have died, sir." "How is that?" said the doctor; "I wrote prescriptions for seven." "Yes," replied the nurse, "but one of them wouldn't take his." In Russia they say the doctor is to be feared more than the disease. A witty Irishman, upon being asked by his friend, a doctor, as to the most appropriate sign to place over the door of his office, suggested an inscription in Italian composed of Dante's famous words, "Abandon hope all ye who enter here." Honest Pat, who was working in the street, filling the trenches made for the laying of gas and water pipes, was reprimanded by an officious doctor for the careless manner in which he was replacing the earth over the gas pipes. Pat looked up good-naturedly with the devil in his eye, and said: "And foith, doctor, ours are not the only mistakes the earth covers." And such are some of the realities you must expect. If, as Dr. Shurly said in his interview, there are 3,500 quack doctors in this State, you may expect even more severe comments.

Number of Doctors in the United States.—In 1850 there were 40,546, in 1880 there were 85,671, an increase of 35,707 in thirty years, or more than 10,000 for each decade. In 1850 there was one doctor to every 569 people, in 1880 there was one to every 585. So that to-day there are in the United States over 100,000 doctors, or one to about every 600 inhabitants. In 1850 there were 2,432 female practitioners, and 1880, 3,000. And here let me say, young gentlemen, be kind and courteous to the lady practitioners of your profession, for it is a conceded fact women make the best nurses in this world. I mean, of course, in the sick room and hospitals, and more of late in families. The Creator of all earthly beings seems to have designed, moulded, and fashioned the fair sex for the tenderest emotions and cares of life. I once had a gallant friend who was a fatalist. He was a Frenchman and a nephew of a distinguished general in the late war; he was not sick, nor suffering from any disease, yet so firm became his conviction that he was going to die that he went to the Sisters' Hospital. I there visited him occasionally for several months, and the treatment which he received under the care of the Sisters was, indeed, the very best—most attentive and kind—and I believe that in some departments of medicine and surgery woman is by nature better qualified than many men, and that she should be regularly educated and licensed for special branches.

Medical Jurisprudence.—While the laws of the land fully protect you in your relations to your patients and the community at large—that is, that you cannot be compelled by any process of law to disclose the secrets of the

sick-room or of your consultations—yet it will hold you legally responsible for want of skill or ability, or neglect of duties. It has been held by the highest courts of Great Britain and the United States that the physician is bound to exercise all his skill and ability as physician. As was said by Mr. Justice Ellenborough in a leading English case: "More than an ordinary degree of skill is necessary for a surgeon who undertakes to perform surgical operations, something more than for a farmer who undertakes to cure a horse." Under the old common law, a physician could not recover his fees unless he had a special contract; that doctrine, however, has long since been abrogated. A physician who acts gratuitously is only liable for gross negligence, but under the spirit of the old Roman law, which still prevails, he would nevertheless be bound to exercise ordinary care and skill. In other words, you have no right to assume or undertake as a physician to render services as such, unless you are qualified to do it. A surgeon does not insure his patient in the operation, but he is bound to display and use sufficient skill and knowledge in his profession, and his highest and best skill is necessary. It is rare that cases of malpractice are brought into the courts, for when the patient is dead the facts are beyond the reach of exact knowledge. I was counsel once for a physician who was charged with culpable negligence in the removal of the placenta, according to the strict rules of the allopath school of physicians. The patient died on the ninth day after the birth of the child, but as the plaintiff was an English Jew, the case presented some features of speculative damages as an offset to the physician's bill, who very foolishly offered the husband of his patient a reduction of his bill if the husband would permit an autopsy to the extent of removing a remarkable development adjoining the bladder of the patient. The jury failed to agree, because it appeared that my client, in making the offer, thereby tacitly admitted some error. However, the physician stood well in his profession, and his reputation was the essential element of defense. In another case I was counsel for a lady whose jaw bone had been broken by a dentist in the extraction of one of her molar teeth. The defense interposed in mitigation of damages was that the lady was suffering from the bone type of cancer, or, in other words, they claimed that four years previous thereto she had had a cancer removed from her breast, and that she had never been cured; that the disease had affected the bones to the extent that the jaw bone was diseased or weakened by the effects of her cancerous condition, and that she should have told the operator the fact of her having been operated upon for cancer before he administered the gas for the extraction of the tooth. I was enabled, however, to prove by the experts that there was no sloughing off or running sore where the jaw bone was broken, when subsequently examined for treatment, and the jury gave her a verdict of $3,500. These cases are cited as practical illustrations of what you may expect in the practice of your profession, if you are guilty of any negligence, want of care, or skill in the treatment of your patients. You should study medical jurisprudence, because the opportunity may occur when you will be called as *experts* to testify in courts of justices, in cases wherein wills are contested, upon the ground of the insanity of the testator, or the want of sufficient mental capacity to execute a will. And as surgeons you may often be called upon in railroad accident cases to give opinions as to fractures and injuries resulting from railroad accidents.

The recent trial of Dr. Graves, in Denver City, and that of young Harris, the Columbia Medical College student, in New York City, charged with the crime of murder by poison, clearly illustrate the necessity and importance of your becoming very familiar with every department of medicine, as in both of these cases expert testimony was of great significance and value. Mr. Taylor, one of the leading authorities upon medical jurisprudence, in his excellent work says: "It is that science which teaches the application of every branch of medical knowledge to the purpose of the law; hence its limits on the one hand are the requirements of the law, and on the other the whole range of medicine." Professor Elwell, in his excellent work on the same subject, page 56, says: "In no department of surgery, perhaps, has there been a greater change

and advancement in treatment than in that of amputations. An amputation that would have been justified by the rules of surgery, and the operator protected in court, twenty-five years ago, or even within less time than that, would now be repudiated by the best authorities, and the operator held chargeable with ignorance and unskillfulness. . . . A medical man cannot, with any safety or prosperity, practice, year after year, without keeping himself informed as to the improvements of his science, especially if he practice surgery, involving amputations, from which so many law-suits result, and which are so fatal to the patient." In a railroad case the celebrated Dr. Sayres, of New York, was my expert upon the question of injuries to the spine, and it was claimed that spondylitis had resulted from an injury to the back, produced by the patient and client having been thrown violently upon the seat of a street-car by the conductor. By the simple method of Dr. Sayres we were enabled to demonstrate that such injuries frequently result from violent blows upon the back, especially on the lower extremities of the back-bone. The test made by the eminent physician could not be overcome by the eminent expert for the railroad company, and a handsome verdict was rendered for the plaintiff. In these trying times of discontent and speculative tendencies, the mental equilibrium of even the most successful men in business is often brought in question, and the necessity for correct medical expert testimony is becoming most important in the due administration of justice, wherein the questions of sanity and physical injury are involved. You cannot, therefore, be too careful in your diagnosis, treatment, and prognosis of mental diseases and injuries, nervous complaints, fractures and dislocations. In a certain case once tried in the Probate Court in the city of St. Louis, one of the most eminent experts upon insanity in the Mississippi Valley testified before a jury, on a proceeding to commit to the asylum a wealthy old gentleman who had married the second time (and who had on deposit in the Safe Deposit Company a large number of United States bonds) that he found from the oral testimony given at the trial sixteen distinct delusions, either one of which was sufficient evidence of insanity. When brought to the test of defining the distinction between a delusion and a hallucination, he was at a loss to satisfactorily determine in his own mind, and for the jury, whether one of the incidents recited was more evidence of a hallucination than of a delusion, and finally sought to escape the gravity of his previous answer by saying that "it might be a merger of both delusion and hallucination," the important question in the case being that, if it was a hallucination, it was of itself no evidence of insanity. The incident recited was the evidence of a landlady where the gentleman roomed, who testified that one morning the respondent told her that his wife (who had died some years previous) had come through the key-hole during the night and scattered poison over the table, and pointed out the dust on the table to confirm his belief. It had no foundation in fact, and was of course nothing more than a hallucination. A delusion in the mind of a person may have some foundation in fact, and is generally an insignificant reality greatly magnified, and a fixed, distinct delusion is unquestionably evidence of insanity. A person may have a fixed and distinct hallucination, and yet have perfect coherency of thought, as was well known in the instances of Napoleon, Martin Luther, and Ben Jonson. Napoleon had an honest belief that he was a man of destiny. Luther believed that during his controversy with the Pope the devil stood behind his chair overlooking what he wrote, and so fixed was his belief that he threw the ink-stand, as he supposed, at his head. Jonson believed that he could hear his mother's voice (she having died when he was young) calling him frequently at night when he was writing. And thus you will see the necessity and importance of never appearing as an expert in any case, unless you are thoroughly familiar with, all the facts and have discussed them over several times with the counsel who may wish to call you as a witness. One of the greatest evils you must contend with is the growing tendency in American society, and especially that of fashionable circles, to use conceptive preventives, and the unprofessional and dishonorable practice among unscrupulous physicians and quacks in abnormal deliveries.

By a good code of professional ethics you can, to a certain extent, overcome these most dangerous practices, which are undermining the whole fabric of our social institutions; strict professional honor should always characterize your efforts, and, like an imperial jewel, adorn your professional career. Permit me to suggest, in conclusion, that if such practices are to continue, then it may be well for you to investigate and determine whether or not it may be possible to produce and evolve man by incubation.

The inventive spirit of the age and the profound research by learned men in the mysteries of the great laboratory of nature may yet reveal some magical process by which this advancing phase of evolution may be accomplished. If we study the economy and characteristics of the busy little honey bee we discover that when a colony loses its queen, the workers (which are females) immediately set about to produce a new queen. They take a single egg and build around it a special cell, enclosing therein certain kinds of food substance, and, as the egg hatches and develops, it becomes a queen in the brief period of sixteen days. And it thus appears that by this certain process of development and nutrition, the distinguishing and mysterious feature of sex, is accomplished—a marvelous feature of animated nature. Why then may not the ovaries of the female at certain periods be caught by a self-inserting, self-retaining, back-action speculum, and then transmitted to an artificial sack containing spermatozoa, and the sack retained in a blood-warm substance which could be supplied with the proper nourishment, and later on with air, during the stages of development, and thus produce the human kind? Who knows but that a superior "Coming Race" may yet come forth Jove-like, without the terrible ordeals of noble womanhood? In a recent paper read before the Society of Medical Jurisprudence in the City of New York, I advanced the thought and theory of vivisection of the condemned homicides, for the benefit of the State and medical science at large, in that by the taking of the human life forfeited to the State by the law, greater benefit would result and less pain be incurred than is now the case by strangulation with rope, or by burning it out with electricity. In other words, the skillful experts could, by placing the condemned under powerful antidotes, coax the spark of life from the body without pain, and thus be enabled, by removing the skull and dissecting the brain while the life force was in the body, to discover novel phases of pathological, psychological, and physiological science. If medical science could thus have the full benefit of such operations, great and important truths could be revealed concerning the mental faculties. And when your committee called at my office for the purpose of securing my presence here tonight, the mysterious process of thought evolved the hope that perhaps at this your final meeting as a senior class some germs of thought might be scattered which in the future would germinate in your minds an increasing desire to investigate all the wonderful problems you may find yet unsettled as to the human anatomy. In the contemplation of the past, do not waste your time in the consideration of exploded theories. Enter at once into the broad domain of enlightened progress, with a fixed determination to accomplish all that it is possible for intelligent and studious man to attain. The poet has said:

> "For of all sad words of tongue or pen,
> The saddest are these, It might have been."

Think for yourselves, consult with older and experienced practitioners, read the meritorious literature of your profession, and now and then embellish your minds with the perusal of such novels as emanate from the pen of that elegant and beautiful writer, Marie Correlli. Her "Romance of Two Worlds" and "Wormwood" are alone sufficient to have immortalized her name in the domain of elegant fiction, because some of the great problems of electricity and the dangerous habit of absinthe-tippling are fully portrayed. And, finally, remember the words of our immortal Longfellow in that incomparable poem, "The Psalm of Life":

> "Life is real, life is earnest,
> And the grave is not its goal.
> Dust thou art to dust returneth
> Was not spoken of the soul."

And if, at the end of your professional ca-

reer, you have succeeded in prolonging and saving the lives of your patients and in alleviating the woes of mankind, you can appropriately have inscribed as an epitaph upon the tablet that may survive you these significant lines:

"Could a man be secure,
That his days might endure
As of old for a thousand of years;
What things he might know,
What deeds he might do,
And all without hurry or care."

THE PRACTICAL APPLICATION OF THE MOSQUERA BEEF PRODUCTS IN THE FEEDING OF LARGE NUMBERS, AND OF THE POOR.*

BY DR. AGERON, OF HAMBURG.

Ever since the obscure question of rational nourishment for the individual was illumined by the pioneer investigations into the processes of metamorphosis in the animal organism, as the ultimate result of which we may regard the so-called theory of nutrition as a branch of physiology; ever since we have learned from the numerous investigations the nutritive value of individual foods and the percentage of content assimilated in the alimentary canal, chemical industry has been seeking to produce from the crude materials of nature preparations which, aside from their value as nutrients, should be distinguished by ready digestibility.

Though at the outset these endeavors were animated solely by an interest in suffering humanity, there was no lack of enterprises which, aroused by the voices of sociologists and the teachers of domestic economy, aimed at the production of dietetic agents for the benefit of all, and which were intended for employment particularly in cases in which a cheap and, at the same time, rational mode of nourishing large numbers was the desideratum—for example, in hospitals, orphan asylums, institutions of every kind, and in the army.

In the course of time the number of such dietetic preparations has grown enormously. The best known are those placed on the market under the name of "peptones," which are primarily employed in the dietary of the sick on account of their ready digestibility. We shall not here discuss the degree in which all these preparations respond to the requirements and expectations of the consumer; experience shows that they all possess, more or less, a high nutritive value and a correspondingly ready digestibility. But the fact that the method of preparation is complicated, tedious, and costly substantially increases their price and thus renders illusive the hope of utilizing such products in the feeding of masses of men.

Very recently a beef preparation has been placed on the market which, produced in America under the name of Mosquera's Beef Meal, has been employed by large numbers of physicians and laymen. This Beef Meal is a peptone-bearing preparation, possessing special advantages in that it contains all the constituents of the beef in concentrated form, is palatable, and is very readily digestible, since its albuminoids are partly in a state of solution.

We need not here enter upon the details of the process of manufacture, inasmuch as this is not kept secret by the manufacturers; it has been repeatedly stated to scientific men and discussed in detail in various professional periodicals. The analyses now before us, of Profs. Ludwig, Chittenden, and Attfield, yield the following average result:

Neutral fat		11.58 per cent.
Ash constituents:		
Soluble	2.28 per cent.	
Insoluble	1.23 per cent.	
Soluble albuminoids (peptone, albumoses)		21.61 per cent.
Insoluble albuminoids		52.80 "
Water		10.50 "
		100 "

In addition to this Beef Meal, there is a second preparation in the form of a peptonized beef extract, under the name of Mosquera's Beef Jelly. We all know that there is an imposing array of so-called beef extracts which are employed in the production of soups, meat broths, etc. In distinction from these beef extracts, consisting almost exclusively of the extractive and salts of the beef, and being thus capable merely of producing a stimulating effect (and generally bearing the collective term "aliments—

*Translated by Joseph Helfman from the Reichs-Medicinal-Anzeiger, No. 3, January 31, 1892.

Genussmittel," as they possess no real nutritive value). Mosquera's Beef Jelly is a preparation which not alone possesses the properties mentioned in a high degree, but may also be regarded as a real nutrient, containing about 50 per cent. soluble aluminoids. The result of chemical examination is as follows:

Water		32.30 per cent.
Ash:		
Soluble in water....	11.10 p.c.	
Insoluble in water..	3.30 p.c.	
Soluble albuminoids (chiefly peptone)		53.30 per cent.
		100 "

A third preparation remains to be mentioned—Mosquera's Beef Cacao—a mixture of Beef Meal with cacao and sugar, whose great nutritive value needs no emphasis.

If we now return to our theme, after this short diversion, we must first inquire: What merits must dietetic preparations in general embody, if they are to be employed in feeding large numbers? The answer to this question must be made from the standpoint of medicine and social economy. The chief requirement of the former is high nutritive value; the latter demands, principally, economy in comparison with ordinary nutrients. If these two chief conditions of a dietetic preparation can be fulfilled by actual proof, it may be employed in feeding the poor, or in the dietary of large numbers. In this respect Mosquera's Beef preparations respond to both requirements, for, in the first place, they possess a high nutritive value, and, secondly, they are distinguished by their relative cheapness.

Mosquera's Beef Meal, for example, possesses a nutritive value equal to that of at least four times its weight of good beef. Let us assume, for purposes of practical illustration, that a man consumes daily, in order to cover a portion of his required allowance of albumen with animal food, 190 grains of meat—about 47 grains of Mosquera's Beef Meal would be sufficient. Considering that a portion of the 190 grains of meat is lost in the process of preparation, thus detracting from an ideal assimilation in the alimentary canal, it may be assumed, inasmuch as the Beef Meal is transformed into the juices of the body, that as little as 30 grains of Beef Meal corresponds in nutritive value to a daily ration of 190 grains. Moreover, that such a product is cheap may be shown by figures: 190 grains of meat cost on an average 0.30 mark; the same quantity of Beef Meal costs 0.22½ mark.*

Economically considered, the financial advantage is perhaps not so striking; but it should be remembered that in such a calculation we must at first be guided by theory alone. Such estimations assume a radically different form in practice, for where we have occasion to deal with the problem of supplying the means of sustenance to large numbers, the purchase price of the products must undergo material reduction. The employment of dietetic meat preparations has been thus far limited chiefly to the nourishment of the sick and convalescent, when it is necessary to supply the organism with a readily assimilable nutriment in concentrated form, so long as the enfeebled digestive powers forbid the introduction of large quantities of ordinary nutrients. Apparently but a small number of people profit by such a mode of nourishment, but if we reflect that every year thousands of sick are fed temporarily with dietetic preparations, we may fitly and justly speak of the application of dietetic agents to the regimen of large numbers.

There are, however, a host of occasions and exigencies in which dietetic beef preparations may profitably be employed in the feeding of large numbers, and in which their use is rendered mandatory by hygienic and dietetic considerations, or is made necessary by unforeseen occurrences, or in which the more rapid feeding of large numbers is a desideratum. In the first respect, diatetic preparations are especially adapted to the needs of childrens' hospitals, orphan asylums and foundlings' homes.

Among the most difficult tasks in the management and conduct of such institutions is the adoption of appropriate dietary regulations. Children's asylums give refuge almost exclusively to such children as suffer from chronic disease of the bones, joints, and glands, nutrition being generally poor,

* According to the statement of the manufacturers, they sell Beef Meal to hospitals at the price of 7.50 marks per kilo.

rendering it necessary that the dietary comprise especially albuminous food in readily digestible form. If the child's digestive organs, even in a state of health, are not naturally adapted to the appropriation of ordinary meat foods, this is in a greater measure the case where the digestive powers have been reduced by wasting disease.

In another place I have dwelt upon the importance of desirable beef preparations in the nourishment of children. For months past I have been using Mosquera's Beef Meal as an addition to children's dietary, or rather as a substitute for meat, and I can affirm with pleasure that the effects obtained from this form of meat-nourishment are altogether striking, with respect both to the general state of nutrition and, especially, to diseases of the digestive organs. Particularly in the latter respect should the fact be mentioned that the substitution of Beef Meal for meat exercised material influence in modifying the appearance and character of the fæces. The infantile stomach and intestines but imperfectly appropriate meat, even when finely comminuted; hence in the excreta we find undigested particles of meat. Moreover, the latter becomes abnormal in odor and appearance, justifying the inference that processes of decomposition have gone on in the stomach. Under such circumstances, the pale, lifeless appearance of the children is but a concomitant of the disordered digestion. As soon as Beef Meal is substituted for meat, the intestinal troubles described disappear gradually and the appearance soon begins to improve.

This experience in individual cases accordingly justifies the demand that such meat preparations shall be given a permanent place in the cuisine and dietary of childrens' hospitals. It is our firm conviction that the advantages of such regulations would soon be manifest, not only in hygienic and dietetic respects, but also in an economical regard. And what is true of the hospitals applies with equal force to all similar institutions—such as orphan asylums, foundlings' homes, and houses of correction. We cannot suppress the fact that the children in such institutions are not ordinarily in the bloom of health. Anyone who has ever had occasion to look about in such places will always have observed that pallid, anæmic faces are the rule; this lies in the very nature of the case, for in all places where large numbers of people must be fed, the financial aspect of the dietary must be taken into account, and we therefore see that in the question of diet those nutrients play the chief rôle, which, in addition to their highly nutritive properties, present the advantage of cheapness. Foremost in the latter respect are the vegetable nutrients in their diverse forms. Their tardy digestibility and the defective assimilation thus resulting are well known. Hence it is that, even if sufficient albumen is supplied to the organism, its appropriation can not be complete. It goes without saying that the administration of artificial meat foods, in such institutions, need not be a daily matter, but they may be given at regular intervals, the weakly children receiving a daily allowance in one form or other. That it would be desirable to include in the circle of institutions employing such preparations others, such as academies and boarding-schools for boys and girls, hardly requires further argument.

A second use for the meat products, in the feeding of large numbers, would arise when unforeseen events occur which prevent the access of fresh meat, or when the situation permits us to calculate beforehand the impending occurrence. Foremost in this category would be all the shifting conditions of war. The provision of the army with conserves of every kind—in the form of large quantities stored in the commissary magazines—is based upon the possibility of such contingencies in the case of war. So long as the means of transportation in the rear of manœuvring armies are undisturbed, and the cattle-supply of the country forming the theatre of war is extensive, the soldiers will be able to procure fresh meat. Military history teaches, however, that even under favorable conditions it is not always possible to procure the needed quantity of meat, and it then becomes necessary to resort to meat-conserves—for example, amongst advance bodies of troops on reconnoitring duty, etc., where meat conserves should form a part of the so-called rations.

In what degree the Mosquera Beef products may be practically utilized as an

important element in the feeding of soldiers during time of war will depend upon the experiments which the military authorities will, in all probability, conduct in time of peace. We know that the German "Erbswurst" (pea-sausage), for example, consists partly of powdered meat, and it is by no means impossible that Mosquera's Beef Meal may possess great advantages for such use, in comparison with the meat powders devoid of extractive and fatty matter. We may take it for granted that it will be possible to compress Mosquera's Beef Meal with leguminous and cereal flours in convenient form, thus producing a food occupying but little space, easily packed and readily prepared for eating. The advantages of such nutriment in condensed form are palpable. Moreover, that Mosquera's Beef products are specially adapted to the nourishment of the sick and wounded in the field hospitals, in sanitary trains or on shipboard, seems to us to admit of no donbt, since their advantages, *ceteris paribus*, will be the same as in their employment with the sick in general. If the proper care of the healthy soldier is a matter of interest to the military authorities, how much greater must be this concern in dealing with the nourishment of men sacrificed to the horrors of war? The times are indeed past when the hospitals were filled more with the sick than with the wounded; hospital gangrene and wound-fevers—thanks to the progress of hygiene and the perfection of surgery—will in the future be held at bay; but, on the other hand, the number of the wounded will be all the larger, as the destructive action of modern gun-projectiles will cause by far greater losses.

To supply the best possible nourishment to all these wounded is not only the mandate of humanity, but is also required by the interests of the army; for, the more rational the treatment, the more speedy the cure of the wounds, hence so much earlier the possibility of utilizing the convalescent soldiers. We may accordingly demand in the interests of the wounded and sick that meat preparations which experience has proved to be adapted to their nourishment shall form part of the provisions for field hospitals.

In conclusion, we would emphasize the importance of the Mosquera Beef products in the dietary of the people, particularly for the children of the poorer classes, with special reference to the fact that certain diseases result from bad and improper food, viz., rachitis and scrofula. What we stated above, respecting the nourishment of children in hospitals, applies here as well. As easy as it may be to convince the official directors of such institutions of the value and importance of artificial beef products, it will certainly be difficult to induce the poorer classes to use them in feeding their children; they will be swayed by their aversion to innovations and by adherence to their traditional habits as well as by their lack of intelligence and fear of greater expense. Nevertheless, beyond doubt, it will be possible, by dint of explanation and instruction conveyed in the daily press and in periodicals devoted to social economy, to impart even to the less well-to-do classes a conviction of the value and importance of artificial meat products. In the foregoing we have sought to indicate in what manner and in what directions artificial beef preparations could and should be utilized on a large scale. If this has not thus far been achieved, the lack of the proper preparations is primarily to blame. That the new Mosquera preparations fulfill one of the chief requirements, viz., high nutritive value, has been proved by repeated chemical analysis; and it has also been shown by numerous experiments on the healthy and the sick that they are readily taken, are well borne, and exercise a correspondingly favorable effect on the general condition of nutrition.

That they are not surpassed in cheapness by any meat-preparations thus far known may be established by comparative figures. We do not doubt, however, that a reduction in price will be made, inasmuch as this will be rendered possible by the more extensive manufacture of the articles following upon increased demand, especially as the purchase price of fresh meat cannot fail to be lower on the American Continent, in view of its boundless wealth of cattle, than in European states.

The practical sciences, foremost among which stands Medicine, have been ever ready to promote and support industrial enterprises which might advance the welfare of all, and notably of the suffering portion of humanity.

From this point of view, we can only express our own hope that Mosquera's Beef products may receive a merited recognition.

BIOLOGY AND MEDICINE.*

BY HUBBARD WINSLOW MITCHELL, M.D.

Biology, in its broadest and most comprehensive sense, embraces within its scope the long group of physiological phenomena which pertain to the functions of that strange vital principle we call life. It includes also the many and successive steps in the development of vital organisms, beginning with the earliest simple protoplasmic cell, or a little animal composed of a single cell, which had its origin in a long past geological age, and continuing onward through vast lapses of time, along the line of lowly animal life, until we gradually reach the highest point in the animal scale, at the head of which stands that highly specialized structure we have called Man.

The science of biology has enlisted in its investigations the ablest scientific men of the world, who have followed its subtle ramifications and manifestations with long and patient labor, until they have raised it to the most important place among all the sciences of the earth. While they have closely studied its phenomena, they have not yet told us to what special force or principle these phenomena are due.

The human mind is rapidly advancing to that point when an answer must be given to the great question—What is life? Agassiz, Draper, Dalton, Darwin, and many others whose names have shed a a permanent lustre upon the pages of scientific history, have said that the world will not be satisfied until we discover the nature of life. There is no class of men so well adapted to discover the peculiar nature of this vital principle as the physician. His life is spent in the study of the various phenomena of this principle, and it is he who investigates its earliest dawn in fœtal life, and follows it step by step through all its changes, until it reaches independent existence, and finally ends in the decay of the organism in which it manifested its peculiar properties. The physician above all others sees this principle in all its subtlety and fineness, and he is able to trace its delicate shades and changes, and to approach so closely to it as almost to discover its precise essence.

When we ask the question, what is life? we must also ask another, namely: When and how did it first appear? In order to answer these queries satisfactorily we must go far back into the remote geological ages of the past, to that period in the earth's history known as the Silurian Age. At that epoch geologists tell us that the whole surface of the earth was covered by a universal sea of warm and fresh water. During the later ages of this epoch an up-lift of the submerged crust of the earth occurred, and a long line of low hills appeared, beginning at what is now Labrador and stretching away towards the west, forming a bow-shaped strip of dry land, known as the Laurentian Hills. The base of these hills formed a silent and solitary line of sea-coast, which was bathed in the quiet waters of that ancient sea. This sea-coast with its little quiet bays and pools, unruffled by a breath of wind, formed a congenial habitat where that vital principle we call Life first appeared. That vital principle manifested itself in the first instance in a little mass of a jelly-like substance, to which the name Protoplasm has been given. It was an albuminous body, composed of six primary elements, namely, carbon, hydrogen, oxygen, sulphur, and phosphorus, which the water held in suspension. The water itself was a chemical compound, composed of two of these elements, namely, oxygen and hydrogen, and to these, already chemically joined, were added the other four, which, under the peculiar influence of chemical energy, or chemical force, united their molecules in such a way as to form this albuminous jelly-like substance. Undoubtedly this substance formed by the union of these six elements was at first of scarcely greater consistence than the water in which it was formed, but by and by under the influence of a special upward growth, it became more concentrated, until it formed a little globular mass of sufficient firmness to enable it to maintain itself as an independent body in the sea.

*Read before the New York State Medical Association, Oct. 29th, 1891.

This little simple globular mass of jelly, or protoplasm, has been called an amoeba or a moneron, a little vital organism or animal composed of a single cell. Simple as it was, it possessed an inherent power to push out a little tiny prolongation of itself, first at one point, and then at another, and in this way, by the aid of this, it was able to move itself from place to place in the sea. It developed also a power to absorb nutrient particles from the water about it, and these nutrient particles were minute molecules of the same elements that composed it. This power of absorbing these elements was the first process of nutrition, and this, once established, caused it to increase in size. When its size had increased beyond its own individual limits, it proceeded to do another thing, namely, to divide itself into two by a process of constriction in its centre. In this way we have two cells instead of one, but each cell was a veritable organism, an animal, simple in structure, yet complete in itself, and possessing the power of movement, of nutrition, and of sub-division. This inherent power to do these things was the earliest dawn of that vital principle which we call Life.

As the process of nutrition and that of growth proceeded, these little simple organisms composed of a single cell advanced to another step—that of aggregating themselves into masses, and when once aggregated, a new power arose, that of a physiological division of labor. This caused some of the cells to do a special thing. Some of the aggregated masses of cells assumed a cup-shape, and became attached to the rocks in the sea by some of the cells joining to others to form a foot-stalk. The little creature thus composed of a mass of cells, being no longer able to seek its food, must have its food brought to it, and in order to accomplish this a current of water must be maintained towards it. This was done by the cells on the outside of the mass pushing out tiny prolongations of themselves, and forming vibratile cilia, and by the waving movements of these cilia a current of water was maintained towards the animal, and thus he was nourished.

It would be a matter of the deepest interest could we follow, step by step, all the processes in the evolution of animal life, from the simplest to the highest. A few of the more important steps can only be noticed here. The little cup-shaped animal above mentioned, to which the name Olynthus has been given, continued its development, and became more and more elaborate and more highly specialized, and in later ages gave rise to higher forms. If we will look back to those long past days, we shall find the fossil remains of a vast multitude of little simple animals, some systemless and composed of a single cell, others composed of groups of cells, and others still more elaborate. These were called Protozoans. From some one of these little animals, probably the sea-worm, were evolved the fishes, through a special tendency of some of the cells to absorb lime from the water in which they lived, and to elaborate it into a bony spinal column. The groups of cells which were transmuted into fishes early evinced a special physiological tendency to develop into certain parts and organs, and this special tendency caused some of them to arrange themselves in a line, and to become segmented, and these segments, absorbing lime from the water, developed bony masses, which afterwards became vertebræ. This was the first formation of a spinal column, from a row of segmented cells, and was also the first appearance of the chorda dorsalis.

As development progressed, the superior surface of the new animal developed longitudinal plates or ridges, which became the neural arch, and a development of plates or ridges on the inferior surface became the ventral or abdominal arch. In this way the first of the vertebrates were formed. A subsequent development of pectoral and anal fins was the first starting point of what became, in a later age, an anterior and posterior limb. This formation of the spinal column, of anterior and posterior limbs, and a head, was the plan upon which all subsequent vertebrated animal life was constructed. It began in the early simple fish of the Devonian age, and continued through the whole range of reptiles, marsupials, and mammals, up to Man. The plan of construction was the same in all, from the lowest to the highest.

The first appearance of life in the little

simple globule of protoplasm, formed in those early ages, under the influence of chemical force, and continuing onward until finally it reached man, is a phenomenon of the deepest interest, and one which the physician, above all other men, is the more able to comprehend and expound. It is he, more than any other, that can appreciate and understand this wonderful arrangement of chemical elements in such a way as to produce a substance that can develop the strange principle we call Life.

The lay scientist views these phenomena from a different standpoint, but the physician sees them with closer and more highly educated eyes. In his labors in the sick-room and in the laboratory he is brought face to face with vital functions and with chemical forces, which enable him to see more clearly than other men the working of these vital processes. In our day he has been able to produce in the laboratory an artificial protoplasm which has shown certain amœbic movements, and, if sufficient time were allowed, perhaps a vital principle might be developed.

If we accept the theory of progressive anatomical development of a higher form of animal type following a preceding lower form—and no other theory seems tenable—the explanation of the facts of the evolution of advancing types of animal life comes clearly within the province of the medical physiologist and anatomist. It is an accepted fact in evolution to-day that a fish was succeeded by a reptile in the development of life, that a reptile was followed by an intermediate form—a marsupial—and that he in turn gave rise to the warm-blooded mammals, who brought forth their young alive at maturity. We are taught that the higher anthropoid apes became transmuted in their anatomical development and gave rise to man, but we must wait until the physician explains to us how this transmutation occurred, what induced such a series of changes, and what were the exact steps that led an ape to change to a man. He can tell us of the minute cellular changes in the anatomical structure and physiological development that induced this upward and onward movement in animal life. If the brain, hip, thigh, leg, foot, and hand of the ape changed and developed into those of man, the medical physiologist can tell us exactly how these changes occurred. He can make plain to us all the steps that have taken place in past geological ages, in the long line of animal life from a protozoan to man.

Passing over the long line of forms of animal life which preceded man in past geological ages, we come to Man himself. This animal, man, has a highly developed brain, and this anatomical brain development causes him to rise above all the other members of the animal kingdom in the scale of intelligence. It is the development of the brain, with its little delicate brain-cells, so minute in its anatomy and so active in its manifestations, that has led him to new scientific conquests, which have materially advanced the interests and the comforts of the world. It is the activity of these brain-cells that has made our century the most highly accomplished of any since man appeared upon the earth. The activities of these cells have given us new triumphs on every hand. Among these triumphs may be mentioned the sciences of chemistry, of physiology, of medicine, of astronomy, and many others. In chemistry we have a triumph of thought and of chemical reasoning in producing synthetically the substance known as salicylic acid. This was produced originally from the willow tree, but chemistry set to work, and by splitting the molecule of carbolic acid and carbonic acid a new product appears, precisely like the original product formed by nature.

Astronomy has revealed to us the many wonders in the great universe about us. It has shown that we are but a minute part of a vast planetary system which circles about our central sun. Until recently the members composing our outer planetary system were disturbed in their movements by some unknown body existing somewhere in the depth of space. The brains of two men, one in our own country and the other in France, set themselves to thinking, and the result was that the unknown body long suspected was actually discovered, sending us its feeble ray across the mighty gap of two and three-quarter billions of miles. This was indeed a veritable triumph of human thought.

The brain has thought out the steam-engine, which has revolutionized the entire industries of the world. By its patient and tireless labor the drudgery and heavy toil of the world are accomplished. While man sleeps, the engine labors for him. It has annihilated distance, and has brought distant climes within easy access and distant products within our reach. By its aid we can circumnavigate the globe with celerity and comfort.

Still another triumph of the brain is the discovery of the forces of electricity, a subtle power akin to that other force we call Life. This strange agent is yet in its infancy, and none yet can tell what its future will be. Already it gives us news of what takes place in China a few hours before, and as we sit at our breakfast table with our newspaper, we read by its aid the thoughts of men at the antipodes. The telegraph and telephone are monster triumphs of mind over matter, conquests of human reason.

Another agent which takes equal, or perhaps greater, rank than either steam or electricity is Chloroform, a subtle agent, whose beneficent vapor, when inhaled, lulls to repose man's agonized body. It is well known that pain is the great conqueror of men. When pain seizes the body, the brain is paralyzed, and steam and electricity and all other forces lie dormant, but by the power of this wondrous drug, pain ceases, and man is able through its influence to resume his masterful sway over all the forces of the earth.

The wise physician is advancing rapidly, and is reaching the point when, by the skillful use of drugs, he can alleviate and cure many diseases that hitherto escaped his skill. But he does more than this; he reaches a higher plane in his profession, and that is to discover the nature of diseases and to learn how to prevent their occurrence. He is not content to sit at the bedside and study and treat symptoms as they arise, but he seeks to know what disease is, to ascertain the causes that gave rise to it, and to learn the means for its prevention. This is the highest aim of his professional life. It is the physician who has enacted sanitary laws which have swept from the earth to a large degree, and sometimes entirely, the diseases which have hitherto so grievously afflicted mankind. Cholera no longer decimates the ranks of men, small-pox is robbed of its horrors, yellow fever is held in check, syphilis no longer stalks spectre-like among us, and low fevers, as yellow fever, typhus fever, and the long array of infectious maladies, have been greatly reduced and held in check by the wisdom of the enlightened physician. To him the world owes a debt of gratitude which it can never repay. His whole life is spent in devising means to ameliorate the condition of men. He does this, not from a hope of reward, but because his life is bound up in advancing a work which will make the world better and happier, and cause the sum of human misery and suffering to become gradually less. Through his intelligence, learning, and dignity the laity came to look upon him as an honored member of society. Empiricism is slowly dying out under his advancing intelligence. Men are heard less frequently to say that the physician guesses at a diagnosis—the correctness of his judgment contradicts this assertion. His educated eye, trained to a high degree of perfection by daily experience, leads him to judge with great exactness of the hidden nature of disease. The autopsy has revealed to him many pathological changes that have taken place in the human organism, and his long experience in dealing with the diseases that afflict the living body, and the appearance of the changes caused by those diseases, which are revealed to him in the post-mortem chamber, ripen his experience and enlarge his views. But, even with all this, the modern physician is but partially equipped if he is not a broad and liberal-minded biologist besides. He must study the phenomena of life in every phase, he must be not only a physiologist, but must be a comparative physiologist, and he must also be a comparative anatomist. It is not enough that he understands the anatomy of the human body, he must possess himself of the long array of facts revealed to him by a patient study of the so-called lower organisms, those members of the animal kingdom which begin next below himself, and pass gradually and successively downward, until he reaches infusorial life. The solid foundation of his education lies, after all, in his knowledge of

comparative anatomy and comparative physiology, which belong to the greater domain of biology, and are a part of it. No man can be a good physician without being first a good comparative anatomist, and no man can be a skillful surgeon without possessing this knowledge to a high degree.

In surgical operations, especially those of a dangerous and important character in vital regions, when death everywhere surrounds the knife, he must have a correct knowledge of the anatomical structure about him. With this knowledge he can proceed safely and calmly to execute the most difficult and dangerous surgical procedures which suffering humanity calls upon him to perform. If we take an enlarged view of the duties and responsibilities of our profession, such a view as a comprehensive study of biology gives us, it adds to the dignity, and honor, and usefulness of the physician, and makes him more highly accomplished and more to be trusted. He becomes then a true benefactor to his kind.

The art of medicine can be raised to a higher and better standard, and hold a more honored place among men, if the physician will enlarge his mind by a patient and comprehensive study of the many important vital phenomena which go to make up the magnificent science of biology.

THE CHLORIDE OF GOLD AND SODIUM IN PYELITIS.

BY G. FRANK LYDSTON, M.D.*

As the administration of the double chloride of gold and sodium by hypodermatic injection is just now attracting some attention, I desire to report a case in which its use has apparently been attended by most excellent results. How the treatment has acted I do not pretend to say, nor do I claim that a single case proves much. I do, however, desire to report the case for what it is worth, in the hope that the remedy may be duly tried under similar conditions by other practitioners. That the remedy has been in this case of valuable service as a tonic and alterative, and that it has had a special action on the affected structures, is to me quite apparent. I do not, however, claim to be able to entirely eliminate the element of coincidence in this solitary case.

A gentleman of 40 has been under my care more or less continuously for the last four years. He consulted me originally for a very tight and tortuous stricture in the deep urethra. This was entered with great difficulty after several weeks' faithful endeavor. Dilatation to the size of 32 French was finally effected. Occasional dilatation has since kept the stricture in a most satisfactory condition. About a year after the stricture had been thoroughly dilated, the patient contracted a heavy cold and developed a slight cystitis with renal congestion. The renal symptoms disappeared, but the urine never cleared up completely, even under irrigation and other usual measures for controlling cystitis. Some months after the cystitis developed, the patient having meanwhile stopped treatment for a time, the gentleman brought me a sample of his urine, which had assumed an appearance which alarmed him, and which was getting perceptibly worse.

On examination I found an abundance of pus and caudate pelvic epithelium. I satisfied myself that I had to deal with a case of secondary pyelitis. The bladder symptoms had not retured. The pus increased in quantity, but there were no subjective symptoms. I finally succeeded in clearing up the urine to a great extent, but it at all times contained pus. Exacerbations occurred from time to time, but there was no coincident constitutional disturbance. At times the pus has been so excessive in amount that, on standing, the urine would deposit two-thirds of its bulk of apparently pure pus. The characteristic pelvic epithelium, which was present in considerable quantity at first, has disappeared, indicating probably complete destruction of the pelvic epithelium. The patient has attended to his ordinary business affairs, and has been in excellent health until recently, when he suddenly broke down, and within a week, as he expressed it, "went all to pieces," and experienced a loss of appetite, diarrhœa, severe night-sweats, and great prostration. I had tried in this case very faithfully all of the rational measures

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at our command, yet had failed to completely clear up the pyuria, although great improvement had occurred from time to time.

When he suddenly grew worse, however, I decided to try the solution of the double chloride of gold and sodium (Clark's formula) prepared by Parke, Davis & Co., of Detroit, giving to the patient in addition Dover's powder in small doses at bedtime for the purpose of checking the night-sweats. I began with 15 drops of Clark's solution, and gradually increased it to 30 drops twice daily. The improvement has been almost marvelous. The patient claimed that within an hour after the first injection he was perceptibly improved, certainly muscular pains of the limbs of which he had complained entirely disappearing; this, to be sure, is susceptible of a psychological explanation. At the present writing, six weeks after beginning the treatment, the patient is in excellent general health, having regained the number of pounds of flesh which he had lost, and is eating well. His bowels are regular, and he has absolutely no symptoms whatever referable to the kidney. The urine contains an exceedingly small quantity of pus, and is becoming clearer from day to day. There has been no trouble in the administration of the drug, no particular degree of local inflammation having been caused. I find, however, that he tolerates the hypodermatic injection rather better when injected beneath the cellular tissue of the buttocks.

BUFFALO LITHIA WATER.

BY WILLIAM A. HAMMOND, M. D.

It is well known that many cases of diseases of the nervous system are complicated with lithæmia, and that unless this condition is removed a cure is often retarded and not infrequently entirely prevented. It is commonly the case that in cerebral congestion producing insomnia, nervous prostration resulting from over-mental work or much emotional disturbance, and in epilepsy, an excess of uric acid in the blood is often observed. This state appears to be altogether independent of the character of the food. I have failed to overcome this persistence by the use of so-called solvents for uric acid. Several year ago I began to treat such cases with Buffalo Lithia Water, with a result so satisfactory that they were as astonishing to me as beneficial to the patient.

The Medical Age.

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B. W. PALMER, A. M., M. D., Editor.

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Editorial.

THE TENDENCY OF SPECIALISM IN MEDICINE.

While the day has gone by when one man can in all things be all, and the tendency towards the thorough investigation of particular fields of research has done much to advance progress and perfect knowledge, it is possible that the pendulum has swung too far in this direction of specialism, which, carried to extremes, dwarfs, rather than extends or magnifies, the vision of Nature's secrets.

That there is an obverse side to the brilliant allurements offered by abnormal development of specialties at the expense of symmetrical growth is the conviction of the many earnest thinkers in the medical world.

In discussing this dwarfing effect of specialism, the editor of "The Point of View" columns of Scribner's Magazine for March moralizes on the one-sidedness of many minds of the medical profession, and believes the world's experience has taught that in certain kinds of cases the wisdom that has finally justified itself has been the wisdom of the unlearned. Moreover, that the babes and sucklings of knowledge have hit upon the truth that the doctors have not been able to see. Thus ordinarily sagacious people come to make as instinctive an allowance for the prejudices of learning as they do for what the unlearned do not know.

Of course, if a thing isn't so, the more reasons a man knows that prove that it must be so, the farther he is from the truth, and the less chance there is of its percolating into him. Thus, when bleeding was the great medical cure-all, the worthy physicians who knew exactly why it must be the one

indispensable remedy were really in a more hopeless bog of ignorance than people who knew nothing about medicine at all.

A valuable pocket of knowledge on some particular line of investigation is often acquired, like ambergris in whales, at the cost of a considerable degeneration of the rest of the creature. Even so great a man as Darwin had to give up such intellectual valuables as his taste for music and his interest in religion in exchange for what he learned about deep-sea fishes and the habits of earth-worms. Medical specialists, particularly, come in for a degree of chastened mistrust, and are in danger of being regarded as intellectual cripples whose minds, from too incessant application to one class of phenomena, get a list, as the mariners say, in that direction.

The point of all of which is that humanity has a rational ground for appeal from all the high intellectual courts. Not only does perfect wisdom not lie in even the highest learning, but the cultivation of microscopic powers of the intellectual vision has a recognizable tendency to make the cultivator intellectually near-sighted.

This tendency is tacitly recognized day by day when we wonder if some person on whose insanity the experts have pronounced is really demented or not; or if there is really virtue in a remedy that the doctors say is bogus; or if there really are ghosts after all, or miraculous cures, though science says there can't be; or if the doctrine of evolution is a mistaken hypothesis, in spite of all the wise men who believe in it.

In every-day practice it is wise for us to listen deferentially to the men of highest learning and to act upon their advice, but it is neither necessary, nor even advisable, to let the voice of authority wholly extinguish our speculations, since great practical benefit has come to the world in time past from the faith of the unlearned, and imaginings which authority has ridiculed have finally worked out into marvelously fruitful results.

Medical specialists then should not contract their vision by looking at their case from one point of view only, but so endeavor to broaden their knowledge of the intimate relations of all organs of the body as to intelligently determine the exciting cause of disease and understandingly remove it or counteract the existing mal-conditions through a wise and discriminating selection of therapeutic agents. We make haste slowly toward establishing medicine as a science, and empiricism still reigns.

PROGRESS IN PHYSIOLOGY.

The British Medical Journal, in reviewing physiological investigation for 1891, concludes that, while no notable discoveries have been made in this department of research, much valuable work has been done.

Perhaps the most remarkable and interesting paper that has appeared during the year is Heidenhain's work on lymph. As physiology advances, it has become more and more abundantly clear that purely physical causes will not account for vital problems. Absorption of products of digestion is not merely osmosis, and now we know that the exudation of lymph from the blood is also not explicable as being due to diffusion under pressure, but is, as Heidenhain shows, dependent on the secretory activity of the endothelial cells of the capillary walls.

The distinction between blood lymph and tissue lymph, upon which he also lays stress, will cause quite a new conception in the minds of those who have hitherto considered that all kinds of lymph are exudations of blood plasma.

Another subject that has excited a considerable amount of interest is the important part played by calcium salts in the various processes of coagulation with which the physiologist is confronted in his study of protoplasm and of proteids. Arthus and Pagès, in France, and Ringer, Sainsbury, and Wright, in this country, have been those who have chiefly pursued this line of inquiry in various directions.

The nervous system continues to attract the earnest attention of both anatomists and physiologists; as the various nervous channels in brain and cord are unraveled by the former, their functions become clearer to those who devote themselves to their experimental study.

Following the methods introduced by Golgi, Ramon y Cajal and Kölliker have succeeded in more fully demonstrating the

non-continuity of sensory nerve fibres with nerve cells. Nervous impulses must therefore pass by virtue of mere contact, instead of through anatomically continuous channels to the cells. Mott has shown that the sensory channels entering the spinal cord do not decussate until they reach the medulla, and that hemisection of the cord produces loss of both motion and sensation on the side of the lesion. This has been confirmed by Gotch and Horsley by an entirely different method. They have investigated the electrical phenomena occurring in the cord under various conditions of activity, and published their results in the Croonian Lecture, delivered before the Royal Society. In connection with the peripheral nervous system, we may mention investigations by Hering and by Waller on color vision, and by Langley on the nerves supplying sweat glands, and by Langley and Sherrington on pilo-motor nerves.

Concerning the relation of the pancreas to glycosuria, the general conclusions arrived at by Minkowski and v. Mering have been amply confirmed by Hédon, by Lèpine, and by Arthus. Lèpine and Barral seek to explain the phenomena by the supposition that the pancreas pours into the blood a ferment which destroys sugar; and that, after extirpation of the pancreas, sugar is allowed to accumulate; but Arthus has shown that, although glycolysis does occur in shed blood, it is a cadaveric phenomenon allied to coagulation, and that living blood contains no glycolytic ferment. We are therefore still in the dark as to the true explanation of the connection between pancreatic disease or extirpation and diabetes. It has long been known that the liver fulfils many important functions of a metabolic nature in addition to that of secreting bile. The pancreas, also, it seems, is not a mere manufactory of pancreatic juice; and now it appears that the kidney also has other uses than the secretion of urine, or at least that it plays an important part in the metabolic cycle. Dr. Bradford, who has as yet only published a preliminary account of his experiments, finds that dogs from which one kidney and the greater part of the second kidney have been removed rapidly emaciate, and secrete an increased quantity of urine and an excessive amount of urea. This result will no doubt be the cause of various theories being promulgated to explain it; but until the full details of the investigation are before us, it would be premature to say more than that the discovery opens an unexpected field for future investigation.

ARE DISEASES CHANGING THEIR FORM?

It is a well recognized fact that many diseases are met with in practice varying from the description of them in standard textbooks. While climatic conditions and individual idiosyncrasy account for some of this variation, doubtless there are other causes operative.

It would seem that by far too little attention has been given to this phase of medical science, and that the non-recognition of possible changes in forms of disease is the reason why many medical men fail in practice. They go on on the old therapeutic lines, while the men who use medicine sparingly and hygienic treatment succeed. Those who imagine that things are going to the bad, because the old medicines are to some degree being replaced by new remedies, have these facts against them. New phases of disorders require fresh treatment, and accumulated experience must decide which is good for this or that. Yet, although we are prepared to recognize a shifting of the basis of attack so far as some diseases are concerned, we cannot agree that the favorite remedies as a whole have lost ground. In these latter days they may have been shorn of a few of the properties with which they had been accredited, but substantially their chief therapeutic properties have survived the scrutiny of modern science, and many remain valuable agents in the physician's hands. The newer remedies have not materially displaced the old ones, for the reason that most of them have come forward to fill unoccupied positions in the relief of disease.

Numerous instances of this might be cited, and no one at the present time who reviews the additions to the materia medica and considers the improvements of modern over ancient methods of medication can but commend the advances made, and look forward with hope for new discoveries which may render remediable diseases now incurable.

Book Notices.

New England Medical Magazine for March, 1892

The contents of this magazine are: Recollections of Louisa May Alcott, Mrs. Maria S. Porter; America in Early English Literature, Isaac Bassett Choate; A Providential Leading, Mira Clarke Parsons; Schumann and Schubert, Zitella Cocke; Stories of Salem Witchcraft, Winfield S. Nevins; Sixty Years Ago, Lucy E. A. Kebler; Negro Camp Melodies, Henry Cleveland Wood; Bryant's New England Home, Henrietta S. Nahmer; Harvard Clubs and Club Life, William Dana Orcutt; Aunt Martha's Secretary, Mary J. Garland; Milwaukee, Captain Charles King; "In a Corner at Dodsley's," Walter Blackburn Harte; Editor's Table.

Among the articles may be specially mentioned the article on Harvard Club Life, by William Dana Orcutt, which will attract a great deal of attention just now, when the newspapers are discussing the barbarities of the "fast set" at Harvard. It is beautifully illustrated, and gives a detailed description of the different college societies.

Mr. Edward D. Mead discusses the Chilian trouble in the March New England Magazine, and takes the view that the United States has been made ridiculous by the recent explosion of war brag. Walter Blackburn Harte devotes his "In a Corner at Dodsley's" to exposing the quackery of professional literary advisers.

Captain Charles King, the famous military novelist, contributes a splendid description of his western home, Milwaukee, to the March New England Magazine. It is finely illustrated.

Many will read the article on Louisa May Alcott, by Mrs. Maria S. Porter, in the March New England Magazine, with interest. It reveals the home life of this noble woman as it has never been revealed before.

Contents of the March Cosmopolitan.

Elizabeth Bisland opens the March number of the Cosmopolitan with an article on the Cologne Cathedral, beautifully illustrated from photographs.

Adam Badeau, the ex-Consul-General to London, contributes some personal reminiscences of one of the grand dames of England.

Mr. Herbert, of Muckross, ex-guardsman, ex-bon vivant, and friend of royalty, contributes a paper on his life when an officer of the guards, giving incidentally much information on the customs of the crack English regiment of a quarter of a century ago.

M. H. de Young, Commissioner of the World's Fair from California, has a most interesting article on expositions, sketching the history of their rise and progressive development, and proving as far as bald statistics can that the Chicago Fair will surpass all preceding ones.

Patience Stapleton's story, "The Trailing Yew," is concluded, and Oscar Fay Adams appears with a delightfully amusing and satirical sketch entitled "An Archbishop's Unguarded Moment." Mrs. Sea's Mexican study is a gem of crystallized observation and color. Charles E. L. Wingate gives one of his careful and pleasant studies of the history of the stage in "Fair Imogen upon the Stage." The other papers in this number are "A Night with a Leopard," a seriocomic adventure in Ceylon; "Political Cartoons of Tenniel," the great cartoonist of Punch; and a paper by the editor on the problem of "Aerial Navigation," which the Cosmopolitan has set itself to solve if it can. The departments are continued by Dr. Hale and Brander Matthews.

Sleep, Insomnia, and Hypnotics. By E. P. Hurd, M. D.; Member of the Massachusetts Medical Society, etc., etc. 112 pages. Paper, 25 cents; cloth, 50 cents. Physicians' Leisure Library, published by George S. Davis, Detroit, Mich. 1891.

In the train of the rush and strain that are characteristic of the Electric Age swarm nervous disorders innumerable, and the grimmest and most dreaded of them all is Insomnia. From whatever cause arising, this trouble plays havoc with the system it invades, and, only too often, successfully resists the best-directed attacks of the doctor. To the physician who succeeds in devising means for even the temporary dislodgment of the unwelcome guest humanity incurs a large debt of gratitude. The author of this

little book has, from the field of his own large experience and from careful and intelligent assimilation of the writings of other authorities, given in compact, concise form an exceptionally able resumé of the physiology of sleep, the causes of insomnia, and remedial measures, medicinal and otherwise. The vast army of those at whom Sleep mocks will welcome this exceedingly helpful little work, and physicians will value it for the practical aid it affords in the efficient treatment of sleeplessness. It well teaches how to

> "Minister to a mind diseased,
> Pluck from the memory a rooted sorrow,
> Rase out the written troubles of the brain,
> And, with some sweet oblivious antidote,
> Cleanse the stuffed bosom of that perilous stuff
> Which weighs upon the heart."

It is rich in therapeutic suggestion, and shows evidence of thorough research on the part of the author into the best modern views of managing this malady.

SYPHILIS IN ANCIENT AND PREHISTORIC TIMES. By Dr. F. Buret, Paris, France. Translated from the French, with notes, by A. H. Ohmann-Dumesnil, M. D.; Professor of Dermatology and Syphilology in the St. Louis College of Physicians and Surgeons; Consulting Dermatologist to the St. Louis City Hospital; Physician for Cutaneous Diseases to the Alexian Brothers' Hospital; Dermatologist to St. Margaret's Hospital, etc. Cloth, $1.25, net; 226 pages. Published by F. A. Davis, Philadelphia and London. 1891.

This work, which is No. 12 in the Physicians' and Students' Ready-Reference Series and Volume I of "Syphilis To-day and Among the Ancients," will assuredly command far more than a strictly professional circle of readers. The syphilitic taint knows no clime and is a respector of none, and, if it be true that "misery loves company," it may well be that the great army of present-day syphilitics will glean consolation from the general conclusion of this volume that history has record of no time when humanity was free from this affliction. The book represents an immense amount of careful and laborious research, and is filled to the brim with curious and valuable information. The translators have done their work well, and the intense interest of the subject-matter insures the work a large and rapid sale.

A MANUAL OF OPERATIVE SURGERY. By Frederick Treves, F.R.C.S., Surgeon to and Lecturer on Anatomy at the London Hospital. In two octavo volumes containing 1,550 pages, with 422 illustrations, mostly original. Per set, cloth, $9; leather, $11. Philadelphia, Lea Brothers & Co., 1892.

Volume I comprises a consideration of General Principles; Anæsthetics; Operations upon Arteries and Nerves; Amputations; Excisions; Operations upon Bones, Joints, and Tendons.

Volume II is devoted to Plastic Surgery; Operations upon the Neck and Abdomen; Operations on Hernia; Operations upon the Bladder, Scrotum, Penis, and Rectum; Operations upon the Head and Spine, Thorax and Breast.

Treves is one of the leading surgeons of London, and can with propriety, in view of his great opportunities and experience, speak with authority. The author has not hastily compiled the views of other workers in the surgical field—of which class of works there are already too many—but has spent four years in recording his conclusions from his own experience. He has traversed the vast field of operations, compared all the different methods for their performance, and, having performed them all, speaks with weight in recommending those most successful in any given case. The work will, we think, be regarded as an original and highly valuable contribution to surgical literature.

A DICTIONARY OF TREATMENT, OR THERAPEUTIC INDEX, including Medical and Surgical Therapeutics. By William Whitla, M.D., Professor of Materia Medica and Therapeutics in the Queen's College, Belfast. Revised and adapted to the Pharmacopœia of the United States. In one octavo volume of 917 pages. Cloth, $4. Philadelphia, Lea Brothers & Co., 1892.

This book is what it purports to be, an index to diseases and all the most approved remedial measures, medicinal and extra-medicinal, electricity, massage, balneology, surgery, etc.

It is alphabetically arranged and well indexed, which makes its extensive fund of

information readily accessible and most convenient for reference.

The author has incorporated in this book in epitome the modern views of the application of well recognized remedial measures for disease.

Those who desire a summary of existing therapeutic knowledge, and those who have not at their command a complete library of modern authors, will find this compilation useful. The author is well known as an author, teacher, and practitioner, and fully competent in gathering material of this character to separate the wheat from the chaff.

Lessons in the Diagnosis and Treatment of Eye Diseases. By Casey A. Wood, C. M., M. D.; formerly Clinical Assistant, Royal London Ophthalmic Hospital, etc., etc. With numerous wood-cuts. Paper, 25 cents; cloth, 50 cents. 154 pages. Physicians' Leisure Library, published by George S. Davis, Detroit, Mich. 1891.

Within the compass of these few pages is compressed a large amount of hints, suggestions, and information worthy the careful perusal of the ophthalmist and general practitioner. Dr. Wood's wide and varied experience renders him peculiarly well-fitted for his self-imposed task, and lends weight and authority to the volume. While those eye troubles which are commonly and easily diagnosed by the general practitioner are not dwelt on, and the ground covered by Professor Mittendorf's "Conjunctival Diseases" and Professor St. John Roosa's "Determination of the Necessity for Wearing Glasses," previously published in the Physicians' Leisure Library, are passed over, those diseases of the eye most frequently overlooked in general practice are treated of fully and authoritatively. It is a thoroughly practical and valuable little book.

The Pathology and Prevention of Influenza. By Julius Althaus, M. D., M. R. C. P., Lond.; Senior Physician to the Hospital for Epilepsy and Paralysis, Regent's Park. Cloth; 64 pages. Published by G. P. Putnam's Sons, New York. 1892.

Notwithstanding the rain of special literature evoked by the persistent aggressiveness of the influenza epidemic, the professional student of this omnipresent and omnivorous disease will be the gainer for the thoughtful digestion of this concise and authoritative treatise. Its pages are devoted to demonstrating (1) that the symptoms of influenza are owing to the action in the system of a special poison secreted by a pathogenous bacillus; (2) that this poison has a special affinity to a definite centre of the nervous system; (3) that an antidote able to neutralize the effects of the poison is formed in the patient's blood; and (4) that the nearest approach to this antidote at present possessed seems to be animal vaccine. This little work is so valuable and opportune that it will undoubtedly meet a warm professional welcome.

First Lines in Midwifery. A Guide to Attendance on Natural Labor for Medical Students and Midwives. By G. Ernest Herman, M.B., F.R.C.P., Obstetric Physician to the London Hospital, and Lecturer on Midwifery; Examiner in Midwifery to the Royal College of Surgeons. In one 12mo. volume of 198 pages, with 80 illustrations. Cloth, $1.25. Students' Series of Manuals. Philadelphia, Lea Brothers & Co., 1892.

This book is an elementary one, designed chiefly for students as a basis of grounding them in the principles of midwifery and enabling them to intelligently build a foundation for the acquirement of the more complete knowledge of the obstetric art afforded by the standard text-books and those excellent teachers' observation and experience. The author is connected with one of the largest hospitals in the world, and ably fitted to expound the fundamental truths of midwifery.

A List of Modern Medicaments.

A complete list of their standard pharmaceutical preparations and specialties has just been issued by Parke, Davis & Co., handsomely prepared with engraved cover and forty engravings of their buildings at Detroit, New York, Kansas City, and Walkerville, Ontario, with views of the interior of the laboratories and offices at Detroit.

No such complete, comprehensive and well arranged list of the products of this house has ever before been published. To those who cannot see in person the thorough equipment of this house for the manufacture

of the highest class of medicinal preparations, this list will convey some idea of their facilities, organization, and system, which have contributed to their success. Copies of this list will be mailed all physicians on request.

Wood's Medical and Surgical Monographs, Vol. 12, No. 3. December, 1891. Modern Materia Medica, with Therapeutic Notes. By Dr. Otto Roth.

This, the last number to be published in the form of Wood's Medical and Surgical Monographs, consists of original treatises and reproductions in English of monographs selected from the literature of foreign countries.

It is divided into six chapters, in which are presented the various remedial agents, grouped according to their physiological and therapeutic action; drugs and other remedies alphabetically arranged, with remarks on their physiological action, therapeutic use, and dosage; remedies most commonly used for subcutaneous injection; and the most commonly employed remedies for inhalation.

Diseases of the Bladder and Prostate. By Hal C. Wyman, M. Sc., M. D.; Professor of Surgery in the Michigan College of Medicine and Surgery, Detroit, etc., etc. 132 pages. Paper, 25 cents; cloth, 50 cents. Physicians' Leisure Library, published by George S. Davis, Detroit, Mich. 1891.

Considering the space limitations of this book, the author treats with wonderful fullness and detail of the many troubles that bladder and prostate are heirs to. Lucid in style and replete with information and suggestions fathered by his wide experience in such cases, Dr. Wyman's book should be in the hands of all general practitioners.

Ueber Myositis Syphilitica Diffusa S. Interstitialis. Von Professor Dr. G. Lewin. Published by August Hirschwald, Berlin. 1891.

This monograph in German comprises a very complete and scholarly presentation of the latest established facts and theories concerning the subject considered.

Notes and News.

New Buildings for the Jefferson Medical College of Philadelphia.—

The Board of Trustees and the Faculty of the Jefferson Medical College have just completed the purchase of two large lots on Broad Street, giving them a frontage of about 300 ft. and a depth of 150 ft., upon which they will proceed to erect at once a handsome hospital, lecture hall, and laboratory building. The estimated cost of the buildings is $500,000. The hospital will be built not only as a suitable building in which to care for the sick and injured, but also will be provided with a large amphitheatre for clinical lectures. The basement of the hospital will be given over to the various dispensaries, each of which will be provided with large waiting and physicians' rooms as well as rooms for direct teaching of the students. The buildings will be absolutely fireproof, and provided with patent sprinklers in case their contents catch fire. By the erection of three commodious buildings the laboratory where delicate work with the microscope is carried on will be separated from the college hall where didactic lectures are given, and so will be free from any jarring produced by the movement of large classes. With the hospital on one side affording clinical facilities and the laboratory on the other side of the college for scientific research and training, the college will be most favorably situated for giving thorough instruction in medicine. Further than this, immediately across the street is the Howard Hospital, and on the adjoining corner the Ridgway branch of the Philadelphia Free Library, which contains all the scientific works belonging to this wealthy corporation. The new site is even more favorably situated in regard to the centre of the city than the old one at 10th and Sansom streets. The move has been made necessary by the large number of students who are now being instructed in this institution, and because the Faculty desire to keep the school and hospital in the foremost rank of medical education in this country. The buildings will be ready for occupancy in the session of 1893–1894.

A New Theory of Intermittent Fever.—

Dr. Matthew D. O'Connell, writing in the Indian Medical Gazette, November, 1891, says that, while not disposed to question the influence of the presence in the blood of a micro-organism, animal or vegetable, in the production of remittent fever or pernicious malarial fevers, he thinks that another hypothesis is not only possible, but is fully adequate to explain the facts of ague and its consequences.

This hypothesis is that ague, or intermittent fever, is due to an intermittent excess of water in the blood, and that this intermittent excess of water in the blood, or hydræmia, is the obvious result of exposure to the meteorological surroundings (heat and moisture) which go to make up what we call a malarial climate.

The facts which have led him to the belief that intermittent fever is due to an intermittent hydræmia are as follows: 1. There is known to be excess of water in the blood in all fevers. 2. Excess of water in the blood, or hydræmia, will cause fever. 3. The meteorological conditions (heat and moisture) which make up what we call a malarial climate are such as must, by preventing its excretion, produce an intermittent excess of water in the blood, or hydræmia. 4. Free elimination of water from the blood of a person suffering from ague reduces the temperature to normal. 5. Excess of water in the blood, especially if intermittent, will produce all the usual sequelæ of ague, viz., (*a*) enlargement of spleen, (*b*) leucocythæmia, (*c*) pigmental deposit in organs. 6. All successful treatment of ague reduces the quantity of water in the blood. 7. Change of climate cures the disease.—*Medical Record.*

Medical Schools in Turkey.—

There are five medical schools in the Turkish empire—one at Constantinople, one at Cairo, one at Aintab in Northern Syria, and two at Beyrout, one of the last named being Protestant and the other Roman Catholic. Only the Constantinople and Cairo institutions possess the right of granting a license to practice; the other three, which are in the hands of missionaries, can only give certificates of study, candidates having to go to Constantinople to be examined. A diploma conferred by the Cairo school gives only the right to practice in Egypt; if a doctor who has obtained a diploma at Cairo wishes to practice in other parts of the Turkish empire he must pass a further examination at Constantinople. The medical school of Constantinople was founded in 1883, and up to the present time has educated some 1,400 practitioners. The teaching staff comprises twenty professors, and the curriculum is of six years. The Cairo school was founded in 1827 by Dr. Clot Bey. The Protestant medical school of Beyrout has been in existence about twenty-two years, during which time it has educated 105 practitioners. There are six professors, and the length of the curriculum is four years. The other two schools are organized on a similar basis.

The Chicago Polyclinic.—

The Chicago Polyclinic, which inaugurated, with signal success, special surgical courses for practitioners, will give this spring a fourth special course, including all branches of medicine and surgery, by the following members of the faculty:

Surgery—Senn, Fenger, Hamilton, Belfield, Harris.

Medicine—Fütterer, Patton.

Orthopædics—Hoadley.

Gynæcology—Henrotin, Etheridge, Banga.

Ophthalmology—Colburn, Hotz.

Rhinology and Laryngology—Brown, Ingals.

Otology—Fiske.

Neurology—Church, McBride.

Pediatrics—Christopher.

Electro-therapeutics—Hayes, McIntosh.

The course will begin Monday, March 28th, 1892, and continue two weeks.

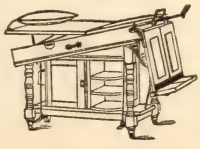
For the special announcement of the course, address the corresponding secretary, Dr. M. R. Brown, 174–176 E. Chicago Ave., Chicago, Ill.

Aphrodisiac Effects from Cocaine.—

These effects have been reported by several observers, and the possibility of producing strong sexual excitement by the use of a small quantity of the drug should be borne in mind. A Philadelphia physician

reports giving a hypodermatic injection of a few drops of a ten-per-cent. solution of cocaine to a woman from whose face he proposed to remove a small tumor. The erotic excitement that followed led the patient to behave in a most unseemly way, although her usual behavior was modest and becoming. A St. Paul dentist reports a similar experience, his patient making an indecent exposure of the person while under the influence of a small injection of cocaine. Dentists should, indeed, be particularly on their guard, since they use cocaine so often in filling and extracting teeth, and are frequently alone with their patients.—*N. Y. Medical Times.*

Operating Chair and Table.—



The cut represents an operating chair combining many excellent features. The illustration shows the chair in the "hips elevated position." It may be readily adapted for the several positions required in surgical and gynæcological practice. This chair was devised by Mr. W. D. Allison, of W. D. Allison & Co., Indianapolis, Ind., who has, through years of experience and with much ingenuity and practical appreciation of the needs of the profession, designed many admirable specialties for the convenience of physicians, including operating chairs and tables, invalid chairs, and throat speculæ of various sizes.

The Latest Vegetable.—

According to the Portland Oregonian, the latest vegetable is the root of the calla lily, which resembles somewhat in appearance the ordinary Irish potato. It is stated that farmers in Florida have begun to raise these calla roots for market. The plants grow readily in swamps, and so thickly that the yield of a single flooded acre is enormous. They reproduce themselves by the multiplication of their bulbs underground, so that the grower has simply to dig up the offshoots and leave the parents to propagate anew. For centuries the Egyptians have cultivated a similar crop during the seasons of the Nile overflow, and at the present time calla lily bulbs are a common vegetable in Japanese markets. So prolific and palatable are they that their propagation in many parts of the United States, where conditions are favorable, may reasonably be looked forward to as an agricultural industry of the future.

Doctor versus Priest.—

The Medical Record editorially comments on a case of post-partum hæmorrhage in which a doctor was asked by a priest to desist from his labors to save the patient's life, in order that the spiritual adviser might administer the rites of the church. The physician, regarding the case critical, refused to comply, and continued his efforts in behalf of the patient until the hæmorrhage was checked. The priest on the following Sunday denounced the doctor's action to the congregation and advised them to employ catholic physicians only. The Record justly says the doctor was right.

Meeting of the Georgia Medical Association.—

The forty-third annual session of the Medical Association of Georgia will meet in Columbus, Ga., on April 20th and continue in session three days. The officers are: President, G. W. Mulligan, M.D., of Washington, Ga.; Vice-Presidents, James M. Hull, M.D., of Augusta, Mark H. O'Daniel, M.D., of Macon; Treasurer, E. C. Goodrich, M.D., of Augusta; Secretary, Dan. H. Howell, M.D., of Atlanta, Ga.

A New Site for Columbia College.—

As Columbia College is considerably cramped for room in its present location, it is probable that another site will be selected for it, and a committee has been authorized by the trustees to secure for the New York Hospital a six months' option on a portion of land now occupied by the Bloomingdale Asylum, the department for the insane of the hospital, which is shortly to be removed to White Plains.

The Michigan State Medical Society.—

This association announces that its twenty-seventh annual meeting will be held at Flint on Thursday and Friday, May 5th and 6th, 1892.

Therapeutic Brevities.

Treatment of Migraine.—Dr. C. W. Suckling, of Birmingham, after dealing with the varieties of headache, directs attention to the indications for treatment in migraine. Care must be taken to place the patient in the intervals of the attack under favorable conditions. Tobacco, alcohol, and especially mental worry, must be forbidden; hot and crowded rooms must be shunned; errors of refraction should be corrected, and the patient's diet strictly regulated. A pill twice daily continuously consisting of one-sixth of a grain of the extract of Indian hemp, one-tenth of a grain of phosphide of zinc, and one-thirtieth of a grain of arsenic, may often give great relief. The severity and number of the attacks is often effectually diminished by one minim of liquor trinitrinæ two or three times daily after meals, continuously. For the actual attacks, rest in bed in a dark room may be necessary; and relief may be secured by a draught every hour consisting of ten grains each of antipyrin and ammonium bromide with twenty minims of sal volatile. The dyspeptic headache is usually removed by blue pill and euonymin.—*Birmingham* (Eng) *Medical Review.*

A New Remedy for Phthisis.—This time the remedy is monochlorophenol, recently prepared by Signor Tacchini, a chemist of Pavia, and tried by Dr. Passerini, of Casate-Nuovo. The drug is a powerful antiseptic, free from the disagreeable odor and from the caustic and irritant action of the related compound, trichlorophenol. It is recommended as an inhalation in various affections of the respiratory passages, and particularly in pulmonary tuberculosis. Monochlorophenol is very volatile, giving off vapors much heavier than air, which are, it is supposed, able by their weight to penetrate even into the alveoli when inhaled. The drug is, according to Dr. Passerini, always well borne even in cases of advanced phthisis. Under its influence the sputa diminish in quantity and lose their purulent character, the bacilli become less numerous, sleep and appetite are restored, and body weight increases. A complete cure is reported in five cases after one or two months' use of the drug, symptoms being undiscoverable even five months after leaving off all treatment.

Peroxide of Hydrogen as a Disinfectant of Water.—Dr. Altehoefer, after giving references to the literature of the subject, gives his own researches on the disinfective power of H_2O_2 dissolved in water. He finds that the addition of 1 per 1,000 to ordinary drinking water, to drinking water containing sewage, or to water containing typhoid bacillus or cholera bacillus, is quite sufficient to destroy the various saprophytic and pathogenic organisms contained under these conditions, if it is obtained perfectly fresh and kept in good condition, and if it is allowed to act for a period of twenty-four hours. It is specially valuable for the disinfection of drinking water because it does not affect the taste, does not alter the color, and in the proportion mentioned is perfectly innocuous. As regards cost, he calculates that sufficient drinking water—say 10 litres—for a family may be sterilized by means of H_2O_2 at a cost of about 2d. per diem.—*Quarterly Therapeutic Review.*

Paralysis Agitans.—Hypodermatic injections of atropine have been attended with encouraging results in the hands of M. Moretti in the treatment of that intractable and pathologically inscrutable malady, Parkinson's disease. The dose used was ½ to 1 milligramme, or about $\frac{1}{65}$th to $\frac{1}{30}$th of a grain. These injections, repeated once every twenty-four hours, brought about a notable diminution in the tremors and a certain re-establishment of the motor powers. Thus, after the fifth injection, some patients were able to carry a glass full of fluid to the mouth, to move the hand steadily behind the neck, to bend the body forwards, etc., all of which movements had for a long time previously been impossible. It was found, however, that in nearly every case the tremor returned when the injections were suspended. When continued, however, the amelioration was maintained, and the remedy is well borne for an apparently indefinite time.—*The Lancet.*

Sublimate Baths for Wounds.—Mr. Mansell Moullin describes a method of dealing with lacerated wounds, especially those in which fracture was complicated by extensive lacerations. It consisted in placing the wounded part in an antiseptic bath at the temperature of the body. He had tried this procedure in thirty cases with only two failures, and these two were, in all probability, directly due to the escape of sewer gas in the immediate vicinity of the patients. He began with a 1 in 1,000 sublimate solution, reducing the strength in a day or two to 1 in 10,000. As to duration, sometimes the bath was employed only for an hour; in others it had

been kept up for a fortnight night and day. In the two patients who had remained under the treatment for a fortnight there were unmistakable symptoms of mercurial poisoning, but they ceased immediately on the bath being suspended. As a general rule, no symptoms pointing to mercurial absorption were present.—*British Medical Journal.*

Salol and Arsenite of Copper in the Diarrhœa of Children.—Mensi (Riv. gen. Ital. clin. Med., Sept. 15th, 1891) speaks most highly of the efficacy of salol in the acute or chronic diarrhœas of children. According to his experience, in the treatment of twenty-seven cases, he finds that the drug in a relatively short time arrests the intestinal flux, calms the colic and tenesmus, and restores the normal functions of the bowel. The medicament is well borne in daily dose of twenty-five or fifty c. g. to two grammes, according to the age and gravity of the case. It does not irritate the stomach, and produces no toxic symptoms. On the other hand, he has found that arsenite of copper possesses no immediate advantages in the treatment of diarrhœa, and the results obtained have no superiority over those effected by other drugs.

Rapid Cure of Buboes.—B. V. Kasaviah, in Indian Medical Record, commends the following: Wash the opening well with antiseptic solution (1 in 2,000) and fill in with iodoform, taking special care not to distend it. Place a piece of boric wool over it, and hermetically seal the same; throw a sufficient quantity of collodium over it to form an adhesive plaster, the whole being secured by a spica bandage. After removal of the dressing a little accumulation of pus was found, and removed by antiseptic washing as before and dressed in the same way. The dressing was renewed a third time, the opening was quite filled up, and the wound healed after 6 days. He has come across many cases of buboes which took some weeks to cure, but this treatment has been found the most effectual and satisfactory in its results.

Treatment of Hæmorrhoids.—Hydrochlorate of cocaine grs. xvj., sulphate of morphine grs. v., sulphate of atropine grs. iv., powdered tannin grs. xvj., vaseline ℥ j., essence of rose q. s.; make an ointment and apply to the affected parts after each movement from the bowels. It is necessary to have the discharges of soft consistence.—*Journal American Medical Association.*

Medical Progress.

Hydriodic Acid in the Treatment of Influenza.—Wm. H. Van Gieson, M. D., in a contribution to Notes on New Remedies, writes:

Owing to the prevalence of influenza at the present time, anything having a bearing upon the successful treatment of this widespread malady must be of value to the profession. Having met with most excellent results during two epidemics in the treatment of the bronchial complications accompanying this disease, the following notes have been written, with the hope that the treatment will be equally efficacious in the hands of other physicians.

One of the most distressing symptoms of this peculiar disease is the dry, racking cough which almost invariably accompanies it. In other bronchial affections the cough is often useful in removing bronchial accumulations, but it is not so in influenza. The cough is out of all proportion to the amount of inflammation of the mucous membrane. This constant mechanical irritation tends greatly to increase the congestion of the upper air passages, and greatly increases the liability to a bronchitis or subsequent pneumonia. The violent paroxysms of coughing are very exhausting, and the patient is often completely prostrated after having passed through one. Vomiting is also apt to be induced by the prolonged fits of coughing, thus tending also to weaken more the already greatly debilitated patient. After the cough has persisted for some time the muscles of respiration become very sore and painful, and cases have frequently been seen where hernia has been produced by the cough paroxysms.

During the epidemic of 1889 I tried all the various expectorants and cough mixtures with but poor results. Some of those containing opium or its alkaloids seemed beneficial for a short time, but as soon as they were discontinued the cough returned, and in some cases remained troublesome for months after. During the last part of the epidemic of that year I began the use of hydriodic acid in the treatment of these bronchial complications, meeting with excellent results. During the epidemic of 1890, and so far during the present one, I have used the acid most extensively, with uniformly good results. Very soon after its administration the cough loses its dry, rasping character, becoming moist, and with the paroxysms farther apart. It is very seldom that a patient is seen who has been obliged to vomit

from the violence of the cough paroxysms after the acid has been administered for twenty-four hours. It has been my practice to prescribe the syrup of hydriodic acid in teaspoonful doses every two or three hours, well diluted in water, gradually increasing the interval of administration as the desired effect is obtained. The syrup has a pleasant taste, and is easy of administration, which is a valuable feature. Having tried the syrup supplied by different manufacturers, and after having on several occasions had a syrup dispensed which contained free iodine (once with nearly fatal results to the patient), I tried syrup of hydriodic acid, and in no case has it ever disappionted me.—proving unalterable and permanent in composition, and satisfactory in therapeutic effect.

The acid is also beneficial in the other catarrhal complications accompanying influenza, such as coryza, catarrh of the digestive tract, etc. In fact, it seems to have a decided action upon all symptoms of the disease. The syrup can be administered plain, or in combination with most of the syrups and tinctures. The combination of the syrup with the tr. of cardamoms and codeia makes a very palatable and efficient mixture.

Treatment of Granular Lids.—Dr. F. Buller, Professor of Ophthalmology at McGill University, in the Montreal Medical Journal, says:

Two remedies which I have had most satisfaction from in the last two years are jequirity and the operation of squeezing out the granulations. The former plan of treatment is only applicable in a certain class of cases, such as were formerly deemed suitable for treatment by inoculation. That is, old, inveterate cases with considerable corneal vascularity and rather firm trachomatous infiltrations, the conjunctiva being rather the reverse of moist and succulent.

The large and numerous round, or flattened and smooth, fibrous granulations are not amenable to the jequirity treatment. In favorable cases, one or two applications of a four-per-cent. solution of jequirity freshly prepared sets up a pretty active croupous conjunctivitis, which often becomes distinctly purulent in character, and the subsidence of this in a few days is followed by a rapid and often complete recovery. We must, however, be prepared to meet with disappointment in some instances, the granulations and pannus failing to disappear where the indications seem clear for the use of this drug, and the reaction it caused quite after the normal type. I have only twice seen it cause troublesome ulceration of the cornea, and occasionally a dacryocystitis.

The operation of pressing out granulations is best done with Prince's ring forceps. The larger and more pulpy and gelatinous-looking the granulations are, the more thoroughly they can be eradicated in this way. Immediately after the operation the conjunctiva should be freely washed with a pretty strong solution of perchloride of mercury, and a weaker solution used several times daily until the abraded conjunctivitis heals. The results of this treatment are, as a rule, exceedingly satisfactory.

I do not mean to imply that the old standard remedies for granular ophthalmia are to be supplanted by the more recent ones, for they still play an important part in the treatment of more recent cases, and, in fact, the judicious use of silver, copper sulphate, alum, oxide of mercury, tannic acid, and some other remedies will generally suffice to cure ordinary recent cases, and it is only when too zealously and persistently employed that they are likely to prove hurtful. This is, perhaps, especially true of the silver and copper preparations, which should never be persevered with in the face of an augmenting irritation.

The true secret of success in the treatment of this disease in any of its forms lies in a careful observation of details, both local and general, and a nice adaptation of the requirements of each case, rather than any attempt at routine practice.

Effective, Pleasant, and Safe Antiseptics.—In these days of antisepsis, but few physicians attempt to treat recent wounds of any character or chronic abnormal conditions of any tissue in which the integrity of the parts is destroyed, without the efficient aid of one or more of the many antiseptics now in universal use. The conscientious, pains-taking physician will not only use antiseptics in such cases, but he will also feel it obligatory to use such as are not only effective, but also pleasant to the senses of the patient and safe as well. We all know how offensive is iodoform. We also know how intolerable is its odor. The same may be said, relatively, of carbolic acid, of naphthol, and many others, while we cannot shut our eyes to the dangers of effective solutions of mercuric bi-chloride, and the staining properties of potassa per-manganas and argenti nitras.

My attention was recently called to two preparations, viz., campho-phenique and chloro-phenique. I have had many oppor-

tunities of using both of these preparations and can only say that I have used them with intense satisfaction. To me it is a satisfaction not to meet with the former salutation: "Doctor, you have been using that stinking iodoform." I can enter a house now and not be traced by my smell. I bind up a crushed finger with campho-phenique and remove the dressings a week afterward, with not a suspicion of fœtid odor or formation of pus.

I treated a troublesome pruritis vulvæ with a solution (25 per cent.) of chloro-phenique, and my grateful patient assures me that the itching has ceased. A troublesome, persistent, periodical, facial eczema, which has resisted treatment by the formulæ of noted dermatologists, is "much better," and the bottle is brought in to be filled with chloro-phenique, which I tried experimentally. A fœtid otorrhœa is cured by ten days' faithful syringing with a solution of chloro-phenique, and a long-standing leucorrhœa is materially improved by cotton tampons soaked in a solution of chloro-phenique and inserted at bed-time.

Thus varied and satisfactory has been my experience with chloro-phenique and its associate, and as a pleasant, very efficient, and altogether desirable preparation, I would be loth to part with either of them from my every-day practice. So pleased have I been with them that I have felt constrained to write thus.—W. C. Baker, M. D., Hummelstown, Pa.

Is Uric Acid a Prime or Sole Factor in the Causation of Rheumatism?—W. E. Shotwell, M.D., writes The Medical News as follows:

In an article, "The Dietetic Treatment of Some Important Neuroses" (The Medical News, January 2, 1892), Dr. John Ferguson, of Toronto, states that uric acid is a prime or the sole factor in producing many neuroses—epilepsy, chorea, hysteria, migraine, etc.—by its action as an irritant poison, circulating through the tissues of the body, when produced in excessive quantity—to cause an "overflow," so to speak, into the circulation.

In my experience with rheumatic affections, I have so frequently noticed excessive formation of uric acid, as shown by an examination of the urine, that I regard it as symptomatic of a tendency to rheumatic troubles, even before the patient has the attack. Uric acid is produced in the system by a stimulating, nitrogenous diet and the use of alcoholic beverages. In the treatment of rheumatic affections we first prohibit entirely, or allow very sparingly, according to the nature of the case and the condition of our patient, an animal diet and alcoholic beverages, especially wines and beers. Next we give the saline mixtures of potassa and soda and the salicylates. Why? Because clinical experience shows such the best course to pursue.

Does not this treatment lessen the quantity of uric acid, which, by its irritating influence upon the lower-grade tissues of the body, gives rise to the rheumatic attack, consequently checking or "curing" the rheumatism? A case of sciatica, due to rheumatism, remains quiescent so long as the excretion of uric acid is normal in quantity, but as soon as the urine shows an excess, exacerbations manifest themselves, which disappear as by magic when the quantity is lessened to normal by a few doses of salicylate of soda or carbonate of lithium—washing out, as it were, the excess of uric acid from the system.

If such be the case, as clinical experience tends to show, that uric acid in excess is a sole or prime factor in the causation of rheumatic affections, have we not the "key" of of the trouble, whereby we may prevent a rheumatic attack in the education of our rheumatic patients to abstain from too free indulgence in an animal or nitrogenous diet and the imbibing of alcoholic beverages? Also, in the examination of their urine, as to quantity, appearance, hyperacidity, etc.; and in the use of the mineral waters—Vichy, Seltzer, Carlsbad, etc.—as occasion may demand?

If such a course were universally followed, how much of the suffering of humanity might be greatly alleviated or wholly prevented, and a step made in advance in the prevention of disease.

Antiseptic Treatment of Ptyriasis Versicolor.—The pathogenic rôle of the *microsporon furfur* is secondary, the parasite developing only on the skin of dyspeptics affected with seborrhœa. Hence there are two indications in the rational treatment of this affection.

General and Antidyspeptic Treatment.—1. Encourage intestinal evacuations by purgatives, salicylate of magnesia, castor oil. 2. Associate intestinal antiseptics with these purgatives and with alkalies.

℞ Bicarbonate of soda, }
Salol, } ää 5 grammes.
Magnesia, }

Divide into 15 powders and give one before each meal.

Local Antiseborrhœic and Parasiticide Treatment.— 1. Each morning hot lotions and

frictions with green soap, allowing the foam to dry on, and subsequent cleansing bath with plenty of water. 2. Every second day, sulphur baths followed by frictions with green soap, with the addition of naphthol or pumice-stone:

℞ Green soap, 500. grammes.
Finely-pulverized pumice-stone, 250. grms.

3. Daily antiseptic inunction with the following mixture:

℞ Resorcin, 5. to 15. grammes.
Ol. ricini, 45. grammes.
Spt. vini rect., 150. grammes.
Bals. Peru, 0.50 centigramme.

Or,

℞ Acid. salicylic., 2. to 3. grammes.
Sulph. precip., 10. to 15. grammes.
Lanolin, 70. grammes.
Vaselin, 18. grammes.

—*Revue Gén. de Clin. et de Thérap.*, No. 49, 1891 (*Medical Record*).

Bicarbonate of Potash in Influenza.—Some months ago Mr. John Crerar advocated the use of bicarbonate of potash in large doses, thirty grains every two or three hours, at the onset of an attack of influenza, on the theory that the blood, if made more alkaline, would resist the invasion of the micro-organism. His conclusions were that, "if used before the attack, it prevents the disease. It destroys the power of the disease within twenty-four hours, generally within four or six hours. The strength is conserved, and the convalescence is short and satisfactory. Sequelæ are conspicuous by their absence. The death-rate is reduced to a minimum. It has more power over influenza than is exerted by any method of treatment over any other disease. If adopted by the whole profession it would make influenza non-existent in one week. It rests upon a sound scientific foundation."

In a leading article, The Lancet of January 23d. says that the last two conclusions may be open to qnestion, but the preceding are statements which no medical practitioner of standing would venture to put forward without good cause. "We may fail to be convinced of his logic, and yet not refuse to accept his facts; and the evident sincerity of his statements, which are supported by the experience of others, and particularly by the personal testimony of a well-known teacher in Edinburgh University, together with the results of the treatment in the wards of the Edinburgh Infirmary, seem to warrant some attention being paid to them."—*Boston Med. and Surg. Journal.*

Copaiba Balsam as a Diuretic.—Following up Obolensky's researches on the diuretic effect of balsam of copaiba (see Supplement, August 8th, 1891, p. 45), M. I. Svetükhin (Vratch, No. 35, 1891) has come to the following conclusions: 1. Copaiba balsam undoubtedly has a very powerful diuretic action. 2. It induces an abundant diuresis not only in cases in which the daily quantity of the urine has previously been subnormal, but even where the quantity has been oscillating within normal limits. 3. The remedy is equally reliable in cases of cardiac, hepatic, and renal diseases, as well as in arteriosclerosis and serous pleurisy. 4. Under the influence of the drug, serous pleuritic effusions are rapidly absorbed. 5. Neither the arterial tension nor the pulse curve shows any alteration. 6. The diuretic effects are usually obtained even on the administration of 5-grain doses thrice daily; 10-grain doses, given three or four times a day, should be regarded as medium ones; 10- or 15-grain doses, given every two hours, as large ones. 7. Neither the small nor the medium doses ever give rise to gastro-intestinal disturbance or renal irritation. If albuminuria is present, they never increase the proportion of albumen in the urine. 8. Given by intravenous injection to healthy dogs, copaiba balsam augments the daily quantity of the urine, but has no effect on the blood-pressure.

For Enlarged Spleen.—The following prescription I used for ten years in the swamps of Arkansas, and it seldom failed to effect a cure when used as directed:

℞ Quininæ sulph.,
Ferri redacti, ää ʒ ii.
Strychninæ sulph.,
Acidi arseniosi, ää gr. iii.
Ext. gentian, q. s.
Misce et fiat pill. No. 70.
Sig.—One pill three times a day.

If the stomach is weak and will not bear more, begin with one pill and increase to three per day.

Stop the fevers first for two or three days with quinine before beginning this treatment. Treatment should be continued from one to two months, or until the enlarged gland can be no longer felt. This has served me better than any other remedy in all chronic malarial cases.

For children I use soluble citrate of iron, iodide of potassium and Fowler's solution, in syrup of orange or a suitable elixir.—B. P. Wilson, in *Medical World.*

The Medical Age.

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Original Articles.

THE LANDMARKS OF GYNÆCOLOGY.

BY FRED. BYRON ROBINSON, B.S., M.D.*

PART I.

In the following remarks I propose to talk of some landmarks in diseases of women, and to calll attention to some prominent clinical, anatomical, and physiological features which will aid any one to diagnose cases. In teaching practitioners in a post-graduate medical school, I have found it to be more impressive to divide the subject of gynæcology into landmarks. I have divided gynæcology into six landmarks, for convenience. The first landmark in gynæcology is anatomy. The second is menstruation. The third is labor. The fourth is abortion. The fifth is gonorrhœa. The sixth is tumors.

This division of the subject will more vividly impress the practitioner with the patient, both in the historical and present condition. It will enable him to put a proper value on symptoms, and to refer a woman's disease to its right starting point. This division will enable the general practitioner to have better views of treatment and prognosis. I consider the above six landmarks important because gynæcology is becoming a great science, and, also, because at least one-third of all physicians claim to be gynæcologists. A man's power in any field is known by his ability to analyze a subject or to generalize it. Bacon was a typical generalizer and a most astute analyzer. To divide gynæcology into landmarks will suggest to the practitioner both analysis and generalization. It will also start him to thinking about ætiology, treatment, and prognosis. This division of the subject will also save much diffuse thinking, which accomplishes little. It will put the man on the proper landmark, which he can chase up in all its corners and thus apply the appropriate remedies. I have found since adopting this method of presenting a woman to a class of physicians that they comprehend the ætiology, the treatment, and prognosis better, as it better enables them to refer the woman's disease to its proper source.

In this article we will speak of the first landmark in gynæcology, which we will name

ANATOMY.

The best man who ever repaired my watch was a jeweler. He seemed to understand its wheels, its cogs, and springs, and he also understood how that watch ran. But he understood its anatomy (structure). He understood its springs of movement (physiology). He was also able to detect whatever caused obstruction to its movements (disease). Now, the gynæcologist is becoming a more important fellow every day. He is fast becoming the abdominal surgeon of the world. The gynæcologist of to-day must have the requisite knowledge to properly enter the peritoneal cavity. He must have the acquired skill to properly treat the toilet of the peritoneum, the greatest known lymph sac. He must satisfy his professional brethren that he goes into the belly for definite objects, and not to solve diagnostic puzzles. The purpose of abdominal exploratory and confirmatory incisions must be very evident or only a poor kind of support will be given to him who opens the belly for light and transient causes. I have noticed that the varied and verbose explanation for the removal of tubes which show themselves to be normal falls on experienced ears with very bad effect. The gynæcologist has not mastered his subject until he can do abdominal section with such skill and judgment as to defy the criticism of professional witnesses and time—that monitor which compels forces to make their own record. Now, the good abdominal surgeon

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arises out of the good anatomist. A man becomes a good abdominal and pelvic anatomist who studies the structure of the abdominal and pelvic viscera as a carpenter studies the structure of a chair or the frame of a house. I can surely testify that to understand the anatomy of the pelvic and abdominal viscera a man requires the aid of the books, the instruction of the masters, the dissecting room, the dog kennel, and practical observations in company with the abdominal surgeon. At present I defy a man to become a reliable abdominal surgeon without the aid of every one of the above. (I expect contradictions.) It is my opinion that pelvic and abdominal visceral anatomy is the most difficult to understand of all anatomy. The chief reason of the difficulty to understand it lies in several directions. Among the first is that the visceral organs are capable of so much mobility without becoming displaced. The loops of intestines may be in almost any part of the abdominal cavity, but that does not constitute a displacement. I have seen the cæcum under the liver, or on the floor of the pelvis—but the subject was healthy.

The viscera have a wide range of movements. A second difficulty to understand the visceral organs lies in their having a great capacity for alteration, without endangering their power to return to normal.

The uterus swells very large, but it returns to normal again. The colon will distend enormously, but, remove the distending force, and it soon gets right again. The tubes, ovaries, and bladder alter very much at times, but do not lose their power to become normal again.

Then visceral anatomy becomes difficult on account of mobility without displacement, and on account of alteration with the power return to normal. It may be curious to note that, though visceral anatomy has been cultivated for nearly 50 years in modern styles of investigating, much yet remains unsettled. The field is yet rich for great discoveries and records. It is true Luschka, Kabelt, and the great Henle did much in their day for good. Pirogoff, Braune, and others began the frozen section, which added much light to the visceral anatomy of pelvis and belly. The magnificent work of Hart and Barbour is yet fresh. Savage's work is good, but needs improvement and, especially, enlarging. We also have the excellent monograph of A. L. Ranney, on the female pelvic organs, and quite a good account of them by Dr. H. C. Coe, in the American System of Gynæcology. We are waiting with much expectation for McClellan's Regional Anatomy on the Viscera, and Quain's new edition should be out in a few weeks. But it would be a boon to gynæcological teachers to have some able man write a complete work on pelvic visceral anatomy in all its modern aspects. In this article I can only give a few points, as space forbids. I will first call attention to the important subject of the Wolffian body. If one takes a fœtus of a pig six weeks old, or a fœtus of a woman eight weeks old, and carefully opens the abdomen with a pair of scissors, he will be surprised by the fact that almost the whole belly is filled with two bodies, viz., the liver and the Wolffian body. In an early fœtus (mammalian) the two great Wolffian bodies seem alone to fill the whole belly. They reach from the heart to the tail, and lie on each side of the spinal column.

Now, these two Wolffian bodies are very important to the gynæcologist, for out of the Wolffian bodies develop the genital organs and the kidney. Remember that the uterus, the vagina (part), the tubes, the ovaries, the parovarium, and the kidney, all develop out of and originate from the Wolffian body. Observe that this means that there is a very distinct anatomical connection between the kidneys and genitals through nerve-supply. Hence disturbing the genitals will disturb the kidneys, and disturbing the kidneys will disturb the genitals. Notice that this development of the genitals and kidneys out of the same Wolffian body means a direct physiological connection by blood-vessels. The practical deduction from this is that any operation on the genitals very quickly and distinctly affects the kidneys. Injury to the genitals quickly disturbs the kidney function. For example, extirpation of the uterus on an elderly patient may in a few days cause nephritis. The extraction may cause albumen or sugar to come in the urine, but, above all, the tax on the kidneys, by the operation, may dangerously lessen the excre-

tion of urea. It should be remembered that urea is the standard by which one measures whether he should operate on the genitals, on the kidney, or cut the peritoneum. The anatomical and physiological connection between the genitals is monthly shown in menstruating girls, who get pain in the back and limbs, whose kidneys vary in their functions at monthlies by irritation from the genitals. However, anatomy teaches the close anatomical and physiological connection between the genitals and the kidney, and also the peritoneum. Therefore, any surgeon who operates on the *peritoneum*, the *uterus*, or the *kidney* should test the urine for albumen, *urea*, sugar, and tube casts. For, any injury to any one of them (peritoneum, kidney, or genitals) affects the others. But, especially, the brunt of the effect falls on the kidney, for its function is quite necessary to life, while the genitals are not. Surely, one-half of useful gynæcology lies in a thorough knowledge of its anatomy. I shall consider that gynæcological anatomy means abdominal and pelvic viscera, so we will make some few remarks on the intestines. The intestines surround and cover up the field of the gynæcologist. Hence, we will open up a woman's belly by cutting the abdomen from Xiphoid appendix to pubis, and also incise the belly wall at right angles to this as far as the quadratus lumborum. Now we have all the viscera lying before us undisturbed, just as nature left them before death stole away life forever. The situation of the viscera as nature left them will surprise some who read books. We observe first the great omentum in its shape, situation, and condition. The great omentum is not there to keep the intestines warm, but to facilitate visceral movement, and when a gut hole arises the omentum falls into it, and makes vigorous attempts to close all gut wounds within its reach. I have seen it act absolutely as a gut wall in gun-shot wounds of the intestines. Now, we must try to distinguish the difference between large and small guts. The size of the gut tells nothing, as the large gut may be much smaller than the small gut. The large gut is knwn by its having three longitudinal muscular bands on its wall, while the small gut has its longitudinal muscular layer uniformly distributed over its walls. The large gut generally has appendicæ epiploicæ, but the small gut has not. The position of the gut tells nothing, as the gut may be found in any part of the belly and pelvis. Anatomy has taught that man has four primary weak points in his gastro-intestinal tract, viz.: (1) rectum; (2) sigmoid flexure; (3) cæcum; (4) the pylorus. They are weak points because disease is apt to arise there. Disease arises easily where there are sphincters. The pylorus and cæcum are man's first physiological ani, and the rectum is his mechanical anus. The sigmoid is liable to disease from physical and physiological reasons. Now, listen to the diseases which attack these four primary weak points of man. Valvulus occurs 60 per cent. at the sigmoid, 30 per cent. at the cæcum. Invagination occurs 70 per cent at the cæcum. Stricture of the intestine occurs 60 per cent. in the sigmoid flexure. Probably 75 per cent. of cancer of the gastro-intestinal tract occurs in the rectum, and the majority of the rest occur in the pylorus. Hence, these four primary weak points are important. Now, how can we find them after the belly is open? The standard to find any intestinal point is the cæcum; so the golden rule is: First find the cæcum. It may be in the bottom of the pelvis, or under the liver, or in the left iliac fossæ. We will now go into the pelvis, but we find it is full of intestines, and the Trendelenburg position does not always get many out. Remove the intestines, and examine the main organ which gives the important locations to all the rest—the uterus. Now, pelvic anatomy is very difficult, but it is well worth the effort to master it. Pelvic anatomy has not kept pace with practical gynæcology, hence there are many unsettled points yet in the field. The abdomen contains the organs which make the physiological and chemical laboratory that holds body and soul together. The pelvis holds in its well-protected, bony box the laboratory of generation. It contains the organism upon which the race depends for future individuals. Our knowledge of pelvic anatomy depends (1) on dissections, (2) on frozen sections, (3) on spirit-hardened sections, (4) on clinical observation, (5) on photography for accurate relations of parts. Errors creep in in each of the above five

points. The main source of our knowledge of pelvic anatomy is dissection. But one must always remember that a most significant point about dissecting a dead pelvis is that its tissue has lost its *elasticity*. The *position* of the uterus has been the subject of much discussion. Heretofore the anatomist has claimed that the normal position of the uterus is retroverted, or in the hollow of the sacrum, while the gynæcologist asserts that the uterus normally lies slightly anteverted. I have proved, time and again, that the uterus in the dead woman does lie retroverted in the hollow of the sacrum, but that in the living woman the uterus normally is slightly anteverted. However, it can scarcely be claimed that so movable an organ as the uterus has a distinct position, and I have even asserted that mere position of the fundus is insignificant. The function of the uterus is gestation and expulsion. Menstruation is a mere protest against not being pregnant. The uterus lies outside the peritoneum, between two of its folds. The blood supply comes to the uterus from the ovarian artery and from the uterine artery. The curious point about the uterine artery is its tortuosity. It curls and twists like a corkscrew. When the uterus is pregnant, the artery is curled and tortuous just the same. The utility of the curling artery must be to allow of sudden motion without becoming ruptured. What holds up the uterus? On this point many opinions exist. I have dissected a goodly number of bodies to find out. It seems to me that the uterus is mainly held up by the levator ani and triangular ligament. The uterus really lies in a bed or nest, and this nest has for its main walls the levator ani and the triangular ligament. The uterus is steadied or held from falling laterally, anteriorly, or posteriorly by the broad ligaments, the round ligaments, and the very important utero-sacral ligaments. The broad, round, and utero-sacral ligaments give little support to the uterus, they simply hold it erect, as the ropes on a ship steady the mast in an upright position. The utero-sacral ligaments are of the utmost importance, as it is almost impossible to have prolapse of the uterus without they are stretched or elongated. The utero-sacral ligaments arise from the neck of the uterus and insert themselves into the second and third vertebræ. A goodly part of the utero-sacral ligaments are simply the continuation of the muscles of the vaginal wall. Thus the vaginal wall and the utero-sacral ligaments act as a supporting beam for the uterus. Now, if the utero-sacral ligaments elongate, the cervix will descend. One could divide the pelvic floor into pubic and sacral segments. The pubic segment contains the bladder, vagina, and uterus. The sacral segment would contain the rectum. Now, the pubic segment is movable, it is visceral in its functions, and moves up during labor. The sacral segment is fixed, and contains the rectum. When prolapse of the uterus arises, it is simply the downward displacement of the pubic segment (the vagina, uterus and bladder). It will simply be hernia of the uterus. The sacral segment, being dovetailed into the sacrum and coccyx, is fixed, and will not prolapse. When a child's head passes through the pelvic floor, the head penetrates between the pubic segment and the sacral segment; that is, the pubic segment is pushed up by the head, while the sacral segment is drawn down by the head. The passage of the head between the sacral and pubic segments is, as Dr. Hart says, like one passing between two swinging doors—one door is pushed forward and the other door is pulled backward. In gynæcology the pelvic floor is very important. We will consider the pelvic floor as the levator ani, with its fascia above and below, plus the triangular ligament. Let us observe the utility of the levator ani in pelvic anatomy:

1. It serves as the pelvic floor.

2. It is the anatomical and physiological antagonist of the diaphragm.

3. It is strong from its extensive origin, viz., from the ischial spine along the white line to pubis and back to opposite spine.

4. Its strength is much increased by having its upper surface lined by the recto-vesical fascia, and its lower surface covered by the anal surface.

5. It restores the everted mucous membrane after defecation. (N. B.—Observe the horse defecate, and notice how nicely the rectal mucous membrane everts and is drawn back with an elastic snap at defecation.)

6. The levator ani forms a sphincter for the vagina. This can easily be felt at digital vaginal examination.

8. The levator ani strengthens the internal rectal sphincter muscle (*a*) by its blending with the fibres of the internal sphincter; (*b*) by its fibres blending with the external rectal sphincter; (*c*) by the fibres of the levator ani running parallel to the rectum, and really becoming longitudinal muscular fibres of the rectal wall.

9. The levator ani acts on the point of the coccyx, and when it contracts it draws the point of the coccyx up toward the pubis. By this process the sacral and coccygeal curve is deepened, and this deep curve serves as a solid, safe bed to support the uterus. I am convinced, by more clinical and post-mortem work in the gynæcological field, that the uterus lies in this hollow considerably in old, slack-tissued multipara.

10. It raises and supports the rectum.

11. It not only holds the vaginal outlet in tonic contraction, but it retracts and restores the everted mucous membrane after the vagina has been dilated.

13. The loops of the levator ani form the essential muscular part of the perineal body.

14. A very noticeable characteristic in regard to the levator ani is *elastic* condition. A laceration of the perineum will do the woman no harm, unless it involves the loops of the levator ani. If they are ruptured, the utero-sacral ligaments will elongate, and the uterus will then retrovert and *slide out* of its bed. Observe in ruptured perineum that the anterior barrier of the deep sacral curve is broken down and the uterus simply glides out. If physicians understand pelvic anatomy they will not talk foolishness about prolapse, and they will readily see how artificial a penary is. It is well to remember that the pelvic floor has three very important functions. The first important function is to allow the rectum to act—to dilate and contract. The pelvic floor allows the rectum to distend with fæces and gas, and to expel both, and still the rectum returns to normal, all through its muscular and elastic tissue. The distension and contraction of the bladder is also a function of the pelvic floor. The second important function of the pelvic floor is to support intra-abdominal pressure. The third pelvic floor function is parturition. The ureters demand careful study to-day in gynæcology. They are about 15 inches long. They start from the kidney and run parallel to each other as far as the brim of the pelvis, keeping, say, three inches apart. They cross the common iliac artery where it divides, to external and internal iliac, and dip down into the pelvis. Here they make a great curve, and pass near the ischial spine, where they are separated from each other the widest, viz., about four inches. The ureters now converge toward each other. They pass under the broad ligaments in vulifera. The ureter passes under the uterine artery, and they enter the bladder two inches apart. They traverse the bladder wall for three-quarters of an inch, and come out on the inside of the bladder, one and one-half inches apart. The way to learn their direction is to push into the ureters from above the pelvic brim, two small soft rubber catheters. *Notice that the ureter runs within one-half inch of the neck of the uterus.* The lower end of the ureter is the narrowest. In a record of 30 cases of cancer of the cervix, 15 of the cases had kidney disease from obstruction in the ureters due to pressure.

I personally know of the ureter being cut several times. It is apt to be cut in vaginal hysterectomy, in Krasky's operation, in gastro-elytrolomy, and other operations. What will one do with a divided ureter? 1. Draw it out into an external wound. 2. Extirpate the kidney. 3. Put divided end of the ureter into the vagina, rectum, or gut. I have tried putting the ureter into the *small gut* four times in dogs, and it made a fæcal fistula each time, and killed the dog. I will now try putting it into the large gut, and note results.

Space forbids mentioning tubes, ovaries, vagina, pelvic fascia, or external genitals, but some of the points pertaining to them will arise in the five other landmarks. I will here speak of the *nerves*. Two kinds of nerves supply the pelvic viscera: 1. The sympathetic. 2. The (cerebro) spinal. The important nerves of the pelvis are the sympathetic. The main origin of the sympathetic nerves which supply the genitals is from the cœliac axis. If one will dissect out the cœliac axis, he will be rewarded

by finding it actually surrounded by a sheath of nervous tissue. The two semilunar ganglia on each side of the cœliac axis constitute the nucleus of the great solar plexus. The solar plexus is made up of the two semilunar ganglia, the pneumogastric nerve, and the three splanchnics. The most important fact to the gynæcologist is the great plexus of nerves around the cœliac axis. Now, the great bundles of sympathetic nerves reach the uterus by three routes. The first and most important is the hypogastric plexus, going to the uterus from the cœliac axis. The second bundle of sympathetic nerves going to the ovaries, tubes, and uterus is the spermatic plexus, which also comes from the aortic or hypogastric plexus. A third route by which the sympathetic nerves reach the uterus is by the branches from the lateral chain of the sympathetic. Very little, if any, spinal nerves go to the uterus. But spinal nerves go to the cervix. Right here comes the intelligent explanation of the connection of the uterus and stomach. The great cœliac plexus directly supplies the stomach. But the great cœliac plexus directly supplies the uterus. Irritation in the uterus will create vomiting. The influence is carried through the cœliac plexus. Sometimes painting the cervix with a solution of $AgNO_3$ will cause vomiting for many hours. I saw this kind of vomiting twice in the same woman from the same cause. The vomiting of pregnancy is nothing more than the transmission of irritation from the uterus up through the hypogastric plexus to the cœliac axis, and this is then directly sent to the stomach through the sympathetic nerves along the gastric artery. Of course the irritation of the uterine peripheral nerves may be magnified by the time it reaches the cœliac axis. In pregnancy the desire to frequently make water is not from the pressure of the fundus of the uterus on the top of the bladder, but it is owing to the dragging of the nerves on the neck of the bladder. The great nerve-centre of the bladder is in the trigone. In anteflexion of the uterus, the pressure of the top of the uterus on the top of the bladder is not the trouble, but the trouble lies in the neck and trigone of the bladder. The bladder is dragged on too much by the contracted sacro-uterine ligaments. Again note that nearly all women who have real chronic uterine disease have stomach trouble; the irritation goes up through the hypogastric plexus. Observe also that women who have uterine disease, especially sub-involution, complain of pain in the small of the back. This is explained by the heavy uterus dragging on the branches of the lumbar lateral chain of the sympathetic. Each of the four or five ganglia of the lumbar lateral chain of the sympathetic sends from three to five branches apiece to the hypogastric plexus, which goes directly to the uterus. Now, say there are four lumbar glanglia on each side and each sends four branches to the hypogastric plexus, then we will have the uterus dragging on thirty-two strans of sympathetic nerves in the lumbar region. Is there not enough reason for pain?

Anatomy teaches that the sympathetic nerves are really nerves of the blood-vessels, that these nerves contain ganglia, and that ganglia alone have the power to produce rhythm or periodic motion. The intestines, tubes, uterus, heart, and bladder have their ganglia, and hence they have rhythm. The blood-vessels of the belly have ganglia and their walls, therefore, contract and dilate, thus they vary the blood-supply. Too much dilation will cause a man to bleed to death in his own belly without a blood-vessel being ruptured.

An important matter in pelvic anatomy is the glands. It should be noted that the inguinal glands drain the vulva and the lower one-fourth of the vagina, hence the glands will be enlarged in the groin from gonorrhœa, cancer of the vulva, and syphilis. Gonorrhœa generally attacks only one gland (bubo), but syphilis and cancer attack and invade the whole chain.

The upper three-fourths of the vagina and cervix is drained into the obturator gland. The uterus, tubes, and broad ligament are drained into the hypogastric glands, while the rectum is drained by the sacral glands and all the pelvic glands drain into the lumbar, which opens into the thoracic duct.

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THE EMPLOYMENT OF THE MOSQUERA DIETETIC PRODUCTS WITH CHILDREN.*

BY DR. E. KRAUSS.*

It is the office of dietetic science, which forms one of the most efficient instruments of medical technique, to determine the proper proportions in which our various nutrients are to be supplied to the organism, in order to replace the waste caused by the processes of metamorphosis, and to specify the proper character and quantity of the foods which are indispensable to the fulfillment of this purpose.

If this task, in view of the complicated nature of the processes which here occur, is no easy one even with the healthy subject, it becomes far more perplexing in morbid conditions, in which the equilbrium of the organism is disturbed. In this respect, however, the greatest exactions are made of the physician's ability, in cases requiring the rational provision of food to replace augmented waste in sick (especially feverish) children, or in instances where the physician wishes to accelerate blood-formation, so that the energy of metamorphosis may be increased and activity of the organic functions thus elevated. Fever-diet and tonic-diet are, accordingly, the two factors which merit the most careful consideration in the selection of the foods.

But the healthy child as well requires the utmost care in the choice of a dietary suited to his developing organism, for metamorphosis is disproportionately more active in children than in adults. "Comparing the quantity of albumen normally provided to the nurseling with the albumen allowance of laboring adults, we find, according to the researches of Kanke, each that kilogramme of a laborer weighing 70 kilos consumes daily 2.7 of albumen; the Molleschott laborer (65 kilogrammes) receives only 20. grammes albumen per kilogramme of bodily weight; the normal and well-fed nursling receives 8.6 grammes per kilogramme—hence, more than four times as much as a vigorous laborer. A boy of even 10–11 years receives 2.4 albumen per kilogramme, hence, 70 per cent. more than the laborer." (Löbisch, article "Ernährung," Realencyclopädie der gesammten Heilkunde.) If it be further considered that in most diseases there is defective digestion of the food resulting from impeded function of the digestive secretions, it will be readily understood why it is necessary to endeavor to supply the albuminoids essential to the building up of the body, in an easily digestible form, thus obtaining a corrective for the disturbed physiological process.

Under the influence of the gastric juice and the gastric ferment, as also under the action of the pancreatic secretion, products are formed in the stomach and intestines from the albumen of the food, which are termed gastric and pancreatic ferments. It has accordingly been sought with the aid of certain substances to transform the albuminoids, which are so essential to the building up of the organism and so difficult of assimilation in disease, into peptones, *outside* of the human body, viz.: to bring the albuminoids into relations generally corresponding to the physiological. The ready absorbability and the nutritive properties of the peptone, have caused its rapid introduction into practice. Hence, the manufacture of this product has everywhere developed, for the purpose of producing it largely for practical employment.

All peptones hitherto on the market have suffered from two great objections. In the first place, one great impediment to their application by physicians lay in the fact that they did not contain in their totality all the constituents of beef necessary to rational nourishment. Peptonized albuminates have very little or no value, if administered without the admixture of other nutrients (fat, other organic substances, inorganic salts). Moreover, with all the peptones thus far known, there was a very disagreeable taste to contend with—a circumstance which in juvenile practice is of the greatest importance. For children a preparation is needed which, above all, shall please the youthful palate, and in addition possess the value of a complete, readily digestible, and concentrated meat regimen.

We must certainly regard as a decided step in dietetic therapy the preparations placed

* Assistant at the Vienna Polyclinic, Department of Prof. Monti. Translated by Joseph Helfman from the Allg. Wiener medizin. Ztg., No. 4, 1892.

on the market by the Mosquera-Julia Food Co., which are produced by a very novel process. These preparations, of whose properties and action we shall treat more in detail in the following report, are: Mosquera's Beef Meal and Beef Cacao. The Beef Meal is a fine meal, for the production of which a choice lean beef is employed. In order to convert the constituents of the beef into peptone, *a vegetable* (and not, as hitherto, an animal) digestive ferment, is brought in contact with the meat, viz., the juice of the pineapple, the well known fruit belonging to the family of the *Bromeliaceæ*. This vegetable digestive ferment was first discovered by the American chemist, Dr. Vincenté Marcaño, in the plants of the *Bromeliaceæ*. He found that their juice possessed the precious property of digesting meat and of transforming albumen into peptone. The beef-fat, freed from fibre, is emulsified, whilst the salts and the extractive remain unchanged. The dried and finely ground product presents a fine brownish powder, which does not possess the disagreeable taste of most peptone preparations. Instead, it has an agreeable flavor, and may, moreover, be readily dissolved if poured into a liquid and carefully stirred. Ordinarily one tablespoonful of Beef Meal—4. grammes in weight—corresponds to 36. grammes of beef, and is a sufficient quantity for a child's meal. Mosquera's Beef Meal is an adequate substitute for meat with all its nutrient constituents, and, thanks to its vegetable digestive ferment, is more easily and rapidly assimilated than most meat foods.

The chemical analysis of Beef Meal, according to the examination of Prof. E. Ludwig, yields the following average result:

Fat		11.58	per cent.
Ash constituents, soluble	2.28		
" " insoluble	1.23	3.51	"
Soluble albuminoid (peptone and albumose)		21.61	"
Insoluble albuminoids		52.80	"
Water		10.50	"
		100.00	"

Tested by proper methods for foreign, noxious substances, the Beef Meal proves free therefrom.

Mosquera's Beef Meal may be stored for several months without change. The nutritive value of this preparation is nearly four times as great as that of lean beef.

Mosquera's Beef Cacao is a fine mixture of Beef Meal with cacao and sugar, in which the taste of the former is completely disguised by the cacao. It is well known that, on account of its chemical composition, cacao itself possesses valuable nutritive properties. One hundred parts of cacao beans contain:

	P. c.
Albuminous substances	20.0
Fat	50.0
Sugar and gum	12.0
Caffeine	2.0
Cellulose	4.0
Tannic acid	3.0
Ash	4.0
Water	5.0
	100.0

In combination with Beef Meal, therefore, the cacao forms a very nutritious and palatable food.

Before proceeding to describe the individual cases in which I employed the Mosquera preparations with success—with patients in the department of children's diseases under the authority of Prof. Monti, the Director, as also in private practice—I will state the mode of administering Beef Meal and Beef Cacao, which I followed in most cases; I shall thus be spared the necessity of repeating this in each instance.

I boiled the Beef Meal for twenty minutes either in water or in a weak beef or veal broth, using a teaspoonful (about 4. grammes in weight), thus making a soup of the consistence of a moderately thick gruel; a little salt is added to the soup. The Beef Cacao was boiled in the usual manner with milk or water, or, when necessary, with watered milk.

In a general way, I may say, as a result of my experiments, that smaller children, of three to four years, have taken the Beef Cacao with pleasure as an agreeable beverage. Many children of this age do not care for the Beef Meal, but, again, it is readily taken and well borne by larger children. In the majority of cases, the Beef Cacao, and Beef Meal soup, were both given twice daily. In the following I give the cases in the order of their occurrence:

CASE 1.—Oct. 16: Josefa A., 13 years old, a pale, emaciated, stunted girl; suffering

for eight days from vomiting after each meal; 3–4 liquid stools daily; tongue coated; thirst; base of stomach sensitive; moderate meteorism; no fever; weight, 24.20 kilogrammes. Diagnosis: Acute gastro-enteric catarrh; anæmia. Excluding all other food, the patient is given twice daily Beef Cacao and Beef Meal soup, 10 Priessnitz poultices to be applied to the stomach.

Oct. 19: For the past 48 hours, no vomiting; tongue not so heavily coated; stomach pains less severe; stool 2–3 times daily and more solid.

Oct. 24: Tongue clean; good appetite; no stomach-pains; appearance fresher; weight, 24.40 kilogrammes.

Nov. 2: Weight, 24.70; patient feels perfectly well; at her request, is supplied with Beef Meal and Beef Cacao, and dismissed with the request that she return for further examination. Patient re-appears on No. 23, weighing 25 kilogrammes; gain in five weeks, 80 decagrammes.

The subsequent cases cited in full by Dr. Kraus are briefly summarized in the following:

Case 2. Child, 9½ years; severe broncho-gastric catarrh. Treatment, consisting of infus. senega with liq. ammon. acet., and a diet of Beef Meal and Beef Cacao, caused the symptoms to vanish, and produced an increase of 1.15 kilogrammes.

Case 3. Boy, 7½; suffering from bronchitis; anæmia and without appetite. Placed on a diet of Mosquera products, the condition rapidly improved, and showed an aggregate gain of 80 kilogrammes in 16 days.

Case 4. Maria R., 12½ years; pulmonary catarrh; anæmic, emaciated; without appetite; great debility. Given Beef Meal and Cacao. At the end of 25 days patient feels very well; gain, 1 kilogramme.

Case 5. Moriz B., 3 years old; prolonged chronic peritonitis; frequent vomiting; diarrhœal stools, alternating with constipation; intermittent fever symptoms; paralysis oculomotoris; has not been able to stand for weeks. Given Beef Meal and Beef Cacao. Visible improvement after 27 days; less paralysis. Total gain in weight, ½ kilogramme.

Case 6. Emma H., 5 months old; a rachitic, pale, emaciated child, suffering from enteric catarrh; five watery stools every day. Given Cacao boiled in milk; later, Beef Meal. Latter, not being well borne, was discontinued. Gain, 12 days, 30 decagrammes; condition, greatly improved.

Case 7. Anna M., 6½ months old; cannot recover from previous attack of cholera infantum; pale debilitated; gain in weight followed the use of Beef Cacao. Obstinate constipation ensued temporarily, but disappeared on habituation to diet. Supervention of pneumonia rendered further observation impossible.

Case 8.—Caroline L., 3 years old; chronic intestinal catarrh; swelling of the mesenteric glands; meteorism; bronchial catarrh over both lungs; no appetite; abdominal pains. Given Beef Cacao and Beef Meal. Gain in 16 days, 80 decagrammes; general condition, satisfactory.

Case 9.—Johann N., rachitic child, one and one-half years old; thin, pale; frequent diarrhœa; good appetite, but no gain in weight; cannot stand or walk. Cacao and Beef Meal well borne, latter in form of a thick soup. At the end of 12 days, patient tries to stand up; total gain in 15 days, 35 decagrammes.

To these typical cases I may add the general remark, as a result of my further observations made in private practice, that in many cases of dyspepsia, gastric catarrh, and enteric catarrh the Beef Cacao proved of the greatest service.

In my experience, Beef Meal and Beef Cacao are particularly indicated in rachitis, in convalescence from severe disease (scarlet fever, diphtheria), in febrile diseases in which the digestive organs are prostrated, in all chronic diseases which are accompanied with anæmia, and in chronic gastro-intestinal catarrh.

The administration of other inviting and appropriate nutrients is, of course, not excluded in cases in which the physician considers it permissible or necessary, but the practical physician will encounter cases enough where the foregoing preparations will fulfill all the requirements of a rational nutrition.

THE FRANKENSTEIN OF THE GOLD CURE!*

BY CHARLES H. MERZ, A.M., M.D.

For those people whose systems are alcoholized, cocainized, and morphinized to such an extent as to make self-control impossible, Dr. Keely claims to have a method of treatment that makes them sober and that cures them of all desire ever to get drunk or delirious again.

The tendency of this man's patients to turn the treatment into something to rave over, to run into extravagance of admiration, is likely to end in a revolt that threatens to undo whatever good he may have been able to accomplish by his peculiar methods of treatment.

In dealing with the man addicted to drunkenness or morphine, do we have to deal with a diseased person, as many physicians now claim? Such an individual may have been primarily wanting in will power, or defective in nervous organization. If he was not originally so constituted, then is he rendered so by the influence and effects of the drug he elects?

When a man commits a crime, in a voluntary fit of drunkenness, his drunkenness is no excuse for him. Such, at least, is the ground taken by some legal authorities. When a man drinks to excess the act is an immoral one. If he commits a crime in this condition, even if he is at the time deprived of reason and judgement, he is responsible in the deed, because getting drunk was his own voluntary act. No man is compelled to swallow an intoxicating draught against his will. The inebriation is of necessity his own voluntary act.

The argument that is employed to sustain the theory of the non-responsibility in *mania a potu* is that continued drinking causes an organic disease, and that while the patient suffers from this disease he is unable to control himself, owing to the pathological condition present. The responsibility rests upon the first drink, and I maintain that that is a voluntary act. After his indulgences become repeated and frequent, the habit of drunkenness is changed to an organic disease, in which the judgment, reason, and will are subordinated and the appetite intensified. Therefore, any ultimate result need not be a voluntary act, but may be the result of the tyranny of a diseased and weakened organization. The whole process is a progressive one, and the necessary interference in its incipiency would prevent its culmination.

The conditions to be met with having been defined, the question is: What can be done?

We are told that this new system consists in the administration of the chloride of gold. Bi-chloride of nonsense! Bi-chloride of gold, as such, does not exist in a free state. If gold is employed at all, it is in the form of the "double chloride of gold and sodium"—which has been used for years by physicians in the treatment of nervous diseases.

The therapeutic value of gold is no variable one. It has been subjected to all manner of tests in neurotic and scrofulous diseases, but its use has been followed by no brilliant effects, indeed it had at one time rather fallen into disfavor, though of late years its use has been revived.

That it is the alleged potent and mysterious weapon with which the habit of drunkenness has been of late attacked, does not seem reasonable. If this wonderful drug exerts so powerful an influence upon a degenerated nerve cell or an exhausted nerve function, why should it not be used as a specific against all mental perversions, whether acquired or hereditary? Why then should we not throw out all possible safeguards, and cure the man that drinks one glass of beer a day, or, for that matter, protect the youth that may in some future unguarded moment take his first glass?

If this be a specific for drunkenness, degeneracy, and crime; for perverted mental tendencies and depraved appetites, why not inject the potent fluid into the arm of the man who takes a drink once a year, and fix him so that he will never reach the stage when he takes one every half hour? If it be a specific against lack of moral stamina and cussedness in general, why not employ it in the case of the kleptomaniac, or inject it into the child that fails to conform to parental law, or proves refractory to the commands of his teachers? If gold be a specific in reality, then why not give it in

*Read before the Northern Ohio District Medical Society, March 17, 1892.

early life, and protect the child from drunkenness, morphine, cocaine, and every other form of degeneracy as he is now protected against small-pox by vaccination? Make protective inoculations, at stated intervals, compulsory upon all.

Under such a belief or plan of treatment, based upon the power of gold, all moral restraint is removed. The man who deliberately destroys his body—that image made after God's own likeness—in the pursuit of physical gratification; who destroys his intellect and his reason by brutish indulgence; who devotes himself to a life of debauchery that would bring the blush of shame to the cheek; this man can, in the end, be restored to an equal footing with his self-denying brother, and be entitled to the same rewards by a few syringefuls of the gold solution. What is to become of our courts of justice? Were it not better to fill the "patient" at once with the solution, and save all the expenses and formalities of trial and punishment? Of what real value will our religious beliefs, our missions, and our churches be in their efforts to strengthen and encourage the unfortunate and the vicious, if the hypodermic syringe, loaded with gold, will cure and restore at once without any personal effort?

There is, in this treatment, a form of misrepresentation that, if not denied, is at least tolerated, and the only excuse that can be offered, the only one that can be conceived, is, that deception, the entire process, justifies the means.

The entire treatment is, and must necessarily be, based upon the operation of mind upon mind. That influence of one patient exerted upon another is sufficient to secure a large per cent. of cures. The influence of the mind over the body is at once conceded. Argument or evidence upon this point is unnecessary. If this influence be shrouded in an atmosphere of mystery and drugs, it is sufficient to impress even physicians themselves.

I am ready to acknowledge, from personal experience, the value of gold and strychnine in improving the digestion and the circulation, and in lessening tissue waste and cell degeneration incidental to the excessive use of an alcoholic or other stimulants, but, while acknowledging the value of these drugs, I maintain that the condition we must eventually correct is a defective will-power—a psychological defect that can be remedied only by psychological means. A certain amount of medication may be necessary to sustain the vital powers and aid the individual in recuperating from his debilitated condition, but his will-power, his only salvation, can be restored only by his own personal effort, and the cure will last only as long as the will-power lasts. There may exist a moral philosophy in which "the double or single chloride of gold and sodium" is synonymous with and comparable to the power of the human will. If it does exist, it can be only in the minds of enthusiastic Keeleyites.

Let the aid of the newspaper press be withdrawn, and the treatment would lapse into the state in which it existed before the Chicago Tribune's ardent espousal, said to be due to the ownership of stock in the Keeley institute, which brought it into such prominence. Suffering humanity is ever in search of the impossible.

The essential features of the Keeley cure, so far as known, as before-mentioned, have long been known and practiced without any of the pretensions to secrecy attendant upon the plan in question. He is not practising any method unknown to others if he uses the double chloride of gold and sodium. Plenty of institutions for the treatment of this class of citizens present 75 or 80 per cent. of cures. The only difference is that these institutions have not been boomed, and they lack that *esprit de corps* that is found among those of the "golden arm."

The history of Brown Sequard's Elixir of Life and Koch's cure for consumption show that these treatments promised as much and even more than this present "fad," but when weighed in the balance of scientific investigation they were found wanting, and have fallen into oblivion. When the treatment now employed for drunkenness has been subjected to the same scientific investigation, it will have shared the same fate. The modern Frankenstein has created a being that will eventually destroy him.

People must sooner or later learn that the system in vogue at Dwight is nothing more than a careful, and a very careful, selection

of subjects that are capable of being influenced and brought to reason—a system of getting the alcohol and morphine out of them as soon as possible, of building up their physical and mental powers, and trusting for the rest wholly to mental influence or suggestion, and the association of those in the same frame of mind, all desiring to abandon the use of alcohol or morphine, and to return to a healthy frame of mind and body.

The time has arrived when the public and scientific men should know exactly what the treatment is, and what is being administered to the patients. Col. Mines, a few weeks after his "cure," died of alcoholism. Jas. G. Fair died of heart disease directly attributed to the treatment. Walter R Earle died a raving maniac a week after his dismissal. Henry Anstey died during treatment. Luther Benson went mad. Charles Vaughn went insane. Ex-Congressman Hopkins went mad, and died soon after treatment.

The "bichloride cure," in the light of present knowledge, may be pronounced unsafe and dangerous to life and sanity. The verification of this statement will be only a matter of time.

If the "Keeley cure" is a safe treatment, if it is free from dangerous and distressing after-effects, a most rigid examination by the State authorities will do it no harm, but will tend to strengthen it. If it produces any or all of the ill-effects attributed to it, its use should be carefully limited or entirely prohibited by law. It is time the public should be informed as to the exact nature of the treatment and the drugs that are employed, and not till then can it demand of scientific physicians the recognition of its merits.

Let the author of this treatment determine his cures as do all scientific institutions that are devoted to the cure of inebriety and the opium habit.

Let him fully recognize the instability of the human will and the fearful loss of nervous power, and write after his cases treated, "remained cured at the end of one, two, five, or ten years." If he will publish at the end of each year full reports of his cases and the results attained in each, as is done by all scientific physicians, then, and then only, may he demand of them the recognition of his "cure" that its merits demand.

The secresy of the treatment we pass over as utterly unworthy of the true spirit that should characterize reputable medical men. Let him inform the interested public of his unsuccessful as well as his successful cases.

The enormous sale of all patent medicines exemplifies the fact that the most worthless of them may be accompanied by the highest testimonials. The average recommendation must be judged according as it was written in expectation of a cure or after the cure was accomplished.

After all, it is only the will-power that conquers. The individual that says no, and means it, succeeds and reforms; the one who cannot do this is beyond any cure; he is like the dog that returns to his vomit.

Sandusky, Ohio.

SUBCUTANEOUS INJECTIONS OF CAMPHOR IN THERAPEUTICS.*

It is well known that hypodermatic injections of camphor are used habitually when required for purposes of excitation in conditions of collapse. According to the observations of Dr. B. Alexander, of Berlin, they constitute a valuable therapeutic measure in several diseases, and merit employment on a large scale.

Our Berlin *confrère* employs for such hypodermatic injections the camphorated oil of the German Pharmacopœia, consisting of 1 part of camphor to 9 parts of olive oil. At each injection he uses 1. gramme of this mixture.

According to Dr. Alexander, one single injection of camphorated oil is sufficient to terminate paroxysms of follicular angina, coryza, and acute pharyngo-laryngitis. In bronchitis *a frigore*, a first injection acts like an expectorant, and after the fourth injection the expectoration completely ceases, even in the most serious cases. The bronchitis of the emphysematous is but slightly affected by camphor.

In fibrinous pneumonia the injections of camphor produce a depression of tempera-

* Translated by Joseph Helfman, from La Semaine Médicale.

ture equal to about one degree, and notably ameliorate the general condition. They are especially indicated in pneumonia of the aged and of individuals debilitated or suffering from cardiac weakness.

The injections of camphor also prove very useful in chloro-anæmia, as well as with cardiac sufferers when digitalis remains without effect: thanks to the camphor, the action of the digitalis in these cases is manifested anew.

Our Berlin *confrère* recommends the injections of camphorated oil, with particular warmth, in the treatment of phthisis during the period of softening, with ulceration, night-sweats, and hectic fever. He claims to have obtained brilliant results, surpassing by far the success yielded by other measures employed under similar circumstances.

The night-sweats and the hectic fever often disappear after the first, and always after the third, injection. The cough and expectoration diminish, the strength is restored (patients long bedridden have been able to arise after the first injection), sleep becomes calm, appetite returns; in cases of tuberculosis of the larynx, the pains in the throat are reduced, and the voice becomes more sonorous.

In cases of hæmoptysis the injections of camphor also exercise a favorable action, the intensity and duration are diminished, and relapses are prevented.

Summing up, Dr. Alexander considers that the injections of camphorated oil constitute the best symptomatic treatment of phthisis during its final period: It renders possible the relief of the patient, whilst prolonging his term of life. It fails only in cases in which the malady is complicated by excessive diarrhœa.

The observations of our *confrère* have also shown that camphor employed in subcutaneous injections exerts a cumulative influence. Indeed, if an injection of 1. gramme of camphorated oil is made daily, the patient begins to experience, generally after the fifth injection, cephalalgia and nocturnal agitation. The medication must then be suspended for at least eight days, for by recommencing the treatment before the expiration of this interval, the cumulative action, characterized by headache and disturbed sleep, is manifested.

It should also be remembered that the injections of camphor must not be employed with very young children, by whom they are ill borne, even in minimum doses.†

A MEDICO-LEGAL REPORT—FŒTUS SANGUINOLENTUS—FŒTUS COMPRESSUS—FŒTUS PUTREFACTO—FŒTUS SAPONIFICATIO.

BY HENRY V. GRAY, M. D.

You may have among your readers many who are entirely familiar with the above names, and may not care to look farther. This article is not for them, but for those who may have been unfortunate, like the present writer and the two physicians called to his assistance. It may afford others light as it has us.

Last October I was officially notified that a new-born babe (still-birth) had been brought into the world under suspicious circumstances. The notification was promptly responded to by me as coroner of this city. In viewing the body, peculiarities were presented which were certainly not very common. One of the undertakers of our city was with me at the time, and he agreed he had never met any such case in his business. I considered the marks suspicious, and at once summoned two of our most intelligent physicians to make an examination and report to me. Returning, they expressed the opinion that foul play only could have caused such marks. Thereupon I had a jury of inquest summoned. After convening, the coroner and jury ordered an autopsy, which was immediately made by the two physicians, Drs. I. H. Lawrence and R. Gordon Simmons. They found examination of the lungs, under hydrostatic test, totally negative. Nevertheless, they believed (the coroner concurring) that the lungs had received air to a certain extent, but that the child had been burned upon chest and the body thrown into scalding water before full inflation of lungs had taken place.

The jury upon this testimony (strictly of

† We learn that Messrs. Parke, Davis & Co. have succeeded in preparing a solution of camphor available for subcutaneous injection, and for inhalation as well.—Ed.

a medical expert nature) decided that "the child came to its death by the hands of its mother with criminal intention."

The coroner suggested to the jury, as night was fast approaching, that he would draw up the verdict at home, and meet the next day to sign it ready to send to the clerk of court. After returning home the coroner concluded to look a little further into the matter, and found there were peculiar surface marks and appearances new to him, excepting in one case viewed several months before, which presented a very modified type of this. In consulting several of his works, he came across here and there some of the presenting features, and in another the names, but it was left to Cazeaux to pencil the classic conditions, and Charpateau to give the names.

These were the surface appearances when first examined: A well-developed zig-zag line upon the upper third of front of chest, distinctly demarked from the skin; the red line and normal skin upon front of chest blending as as one line; there was a general tenuity, laxity, and reddish or rosy transparency from this line over the entire abdomen as well as chest; also a bright-reddish, brick-dust appearance, particularly of the zig-zag line above spoken of. There was great flaccidity apparent, denuding of the integument of limbs and back, general looseness and flatness of face and features, and a rather aromatic odor.

This is about the general surface view of the body as it appeared to us, and upon which we formed an opinion, placing this woman's life in jeopardy and making her liable to a criminal charge.

This is a dark picture to contemplate. We are holding this woman's life absolutely in our hands. Our intelligence, nevertheless, is not greatly inferior to the many medical minds who are brought before courts to testify in criminal cases. Let us hope we will help some of your readers to judge better, though it has cost us some mortification, but greater pleasure, in the end to know we sought light and it came, grand and glorious, a sacred halo when most needed.

The next morning the coroner and jury met, not to enlarge and strengthen the criminality of this unfortunate woman, but to gladden each other's heart to know she was not a criminal, and that our verdict was revised and reversed, and one of "not guilty;" that the child came to its death "*in utero*," in consequence of a syphilitic taint, causing death and abortion, and that the peculiar condition is in technical nomenclature known as "fœtus sanguinolentus."

Ruge speaks of it also as the "macerated fœtus." All the conditions are primarily due to maceration in the amniatic fluid after death (in utero), and "almost always the outcome of syphilis," hence the precept of of Depaul, "to always use an anti-syphilitic treatment in women who repeatedly abort." Syphilis is not always the cause, however. Many other causes could be produced—"high maternal temperature of 107°, even though it lasts but a few moments, will inevitably kill the fœtus."

The "fœtus compressus" of the Germans may be all as above, but compressed into a "ginger-bread image" or shape, and implies in some cases a multiple pregnancy. The shape is like a "shingle man" the boys in my time used to cut out of a shingle with a knife to represent a boy or girl.

"Fœtus putrefacto" only differs in degree, the maceration continuing until putrefaction takes place. This putrefaction is different from that of the open air.

"Fœtus saponificatio" implies a stage where saponification has taken place.

You can multiply and make other varieties, but they are but degrees of the first.

Roanoke, Va.

A TRIAL OF JAMBUL IN DIABETES MELLITUS.

BY O. W. BAYMER, A.M., M.D.

A new drug that gives favorable results in any disease should be carefully investigated by the profession in order that its intrinsic virtue may be firmly established.

For some years past clinical reports of diabetes mellitus treated with jambul (*Eugenia Jambolana*, Lamarck) have appeared from time to time in medical literature, and have been more or less in favor of this remedy. Yet its true place in the therapy of this disease has not been established, since, while some claim the fluid extract gives the

best results, others praise the virtue of the powdered seed, and still others have found in their experiments that the cases were aggravated instead of improved from its use.

The object of the following report is to lend a helping hand, in a small way, to still further establish the virtue of the jambul treatment.

The first patient to whom I prescribed this drug was a male, 55 years of age, cigar-maker by occupation, who had been declining in health for about a year. He came under my care August 27th, 1891, complaining of all the symptoms that might be expected in a well-marked case of diabetes mellitus. He was found, upon accurate measurement, to be passing five quarts of urine in twenty-four hours, light in color, resembling syrup, having a specific gravity of 10.33, acid in reaction; no albumen, but 7½ per cent. of sugar.

Treatment.—First, patient's diet was restricted, the ordinary diabetic regimen being allowed, with plenty of outdoor exercise and a daily sponge bath, with iron, quinine, and strychnine as a general restorative. After one week of this treatment patient reported no improvement. Examination of urine confirmed the statement.

Patient was ordered one drachm fluid extract of jambul, together with half a grain of codeine sulphate, one-half hour before retiring. Six days after this the patient reports that he feels better, passes urine less frequently, feels stronger, is less thirsty, and appetite is less voracious. Examination of urine shows specific gravity 10.30, color better, and quantity voided in twenty-four hours did not exceed three quarts. Analysis showed 5¼ per cent. of sugar. Patient states that the bowels are more regular than they have been for months. The irritation of the bladder and urethra, which troubled him greatly, was somewhat relieved, and excoriations which were present were healing.

On September 18th he was passing only 64 ounces of urine, and had gained four and one-half pounds in flesh. Four per cent. of sugar present on this date; specific gravity was 10.32, but color was nearer normal.

October 10th: Patient still feels improvement, but specific gravity does not go down —still 10.32. It was now decided to try the powdered jambul seeds. Accordingly, 12 grains, together with ⅛ grain of codeine sulphate, were given four times a day.

On October 17th patient had gained two more pounds in weight, was passing only 50 ounces of urine, with 2.9 per cent. of sugar present.

On October 26th specific gravity was 10.28; analysis showed but 1¾ per cent. of sugar; urine was normal in color and quantity.

On November 12th specific gravity was 10.00; only a trace of sugar present. Patient feels very well, looks and acts the same; does not have to get up in the night to urinate, and has the elastic walk of a younger man. At this time the codeine was dropped and pulverized jambul seeds given in twelve-grain doses, four times a day. This was kept up for over four weeks to see what effect it would have. The urine was examined every week or ten days during this time, and the amount of sugar never exceeded two per cent., and only reached that after the patient indulged freely in cakes, pumpkin pie, etc.

On November 22d specific gravity was 10.26, and on November 24th was 10.24, with eighty-seven hundredths of one-per-cent. of sugar present. It is well to state that patient notices that after taking jambul alone he at times has slight nausea, which, however, subsides quickly after a little exercise. Patient says he thinks that when the jambul is taken immediately after eating it has a better effect than when taken between meals.

On November 16th specific gravity was 10.22, and less than one-per-cent. of sugar was present. On December 4th specific gravity was 10.20; only a trace of sugar present. During the past month the patient has felt so well that he has not reported so often, but I have examined the urine once recently, and then found one and one-half per cent. of sugar present, which was due no doubt to errors of diet, since his people tell me that he feels so well that he sometimes insists upon eating forbidden things. However, he states that he never felt better. He weighs ten pounds more than he did five

months ago, and looks, feels, and acts better in every respect.

The second case is a lady 53 years old, whose father is said to have died with diabetes. I saw her first October 26, 1891. She stated that she was passing a great deal of urine. I found specific gravity 10.40, color very pale, and eight and three-fourths per cent. of sugar present.

This patient is a hard-working woman, who has to care for a large family. She has been under the same treatment as the first case, with like, but not so marked, results. Specific gravity of urine has fallen to 10.30, and amount of sugar has decreased over one-half. Excoriations, which she complained of very much when first consulting me, have healed; does not have to urinate often at night, and seems better in every respect.

I would sum my experience with this drug as follows:

1. Both the fluid extract and the powdered seed of jambul have virtue in diabetic disease of the saccharine variety, but, of the two, I prefer the seeds powdered.

2. They show their favorable action by reducing the quantity of sugar, allaying irritation, healing excoriations, diminishing the quantity of urine, and restoring it to its normal consistency and color. In addition, what is of great importance in this disease, they keep the bowels in a well regulated condition.

3. In neither case could I find much difference with or without the codeine, with the exception that it allays a tendency to nervousness.

4. I attribute the more rapid improvement of the first case to the fact that he was in a position that he could give up his work and rest, while the last case reported has all along been compelled to do all of her housework and care for her family.

5. I don't believe the full power of jambul will be made manifest unless careful attention is given to diet.

6. From the facts I have elicited in these cases, I am led to believe that in jambul we have an efficient help in the treatment of this disease.

Camden, New Jersey.

EUCALYPTUS OIL IN HEAD PAINS OF INFLUENZA.

BY W. S. YATES, M.D.

Having administered oil of eucalyptus (P., D. & Co's.) in a case of occipital headache of the congestive type, precipitated by an indiscretion of diet, with prompt and satisfactory results, I was led to use it in the severe head pains (occipital) accompanying and following acute attacks of influenza, with equally satisfactory results.

Like results have been experienced by several physicians to whose attention I directed this remedy.

Last winter, while practicing at Hueneme, Cal., I was called one night about 10 o'clock to see a Mrs. P., aged 42, who was suffering intensely from occipital headache; also from neuralgia of the 5th pair of nerves and soreness of the muscles of the neck. From an account the husband gave of an attack of illness his wife had experienced some days previously, with fever, chilly sensations, sore throat, muscular and bone pains, I decided the condition was a sequel to influenza, aggravated by the markedly neurotic condition of the woman.

I immediately administered pills of phenacetin et salol, ää grains iiss. The stomach was in an exceedingly irritable condition, and the pills were soon vomited. After several unsuccessful attempts to administer drugs per stomach, I gave a hypodermic of morph. sulph. grain ¼. Patient rested fairly well during the night, and on calling the following morning I found she was fairly comfortable in the recumbent position, but on attempting to rise suffered intense pain.

After a mild aperient had taken effect, I gave pills of phenacetin et salol, ää grains iiss., every two hours for six hours. In spite of this the head pains grew worse, until at night the pain was almost unbearable. I resorted to liniments of belladonna, aconite, camphor, and menthol without affording any relief. I gave toward evening 15 minims oil eucalyptus in empty capsule. The effect was marked both in the neuralgic pains and the steady throbbing occipital pain. In 15 minutes patient felt much relieved, and in less than half an hour was perfectly comfortable. Slept nearly all night; suffered no

pain, except in morning, from the sore muscles of the neck. For this condition, I applied flannel saturated with oil eucalyptus, and in 24 hours this condition was much improved, and gradually disappearing. Flannels were applied in this way for two days.

For several successive days my patient was threatened with a return of the severe pains toward evening, but the administration of 15 minims oil eucalyptus in every instance prevented the attack.

From this experience, I was almost convinced of the efficacy of this product in influenza, and I administered it in several cases of similar type only during the acute attack, and in every instance with equally satisfactory results.

During this epidemic of influenza, I had a number of cases in which the temperature at no time exceeded 102°, and all had the occipital head-pains, with irritability of the stomach. A number of cases with higher temperature, 103° to 103½°, were noted as having the respiratory complications.

In the hands of physicians in this section of country, oil eucalyptus has given the most satisfactory results in these cases when the head-pains have been severe, giving relief in less than one-half hours after the administration of 10 to 15 minims.

One would naturally expect an aggravation of the condition of irritability of the stomach which was a prominent symptom in my cases, but such was not the case, the oil being retained and producing only a sensation of warmth.

In Pharmacology of the Newer Materia Medica, Geo. S. Davis, Detroit, in Part VIII, pp. 689 and 690, I find reports on "the use of Eucalyptus in Headaches, Neuralgias, etc.," Drs. M. J. Lewis and G. E. De Schweintz, in Medical News, in which these authors cite eight cases, in all favorable to their claims to the efficacy of eucalyptus. I quote as follows from Pharmacology of the Newer Materia Medica, Part VIII, p. 661, under Materia Medica of the Eucalyptus Oils, Wm. Sutherland, M.H.B.S., in Chemist and Druggist, March, 1887:

"Considering its powerful antiseptic effect, its poisonous action when taken internally is remarkably mild, so there is no danger from its absorption by even a large wound surface. When it is carefully purified, as much as ¼ ounce can be taken diluted, with no more serious results than considerable depression."

When we consider the marked depression often following the administration of the coal tar derivatives, oil eucalyptus will gladly be chosen by many of the profession as an analgesic, especially in influenza, where there is often already a condition of depression.

I hope soon to publish reports of the results obtained by other physicians of riper experience than my own. The most eligible way to administer this oil, is in the soluble elastic capsules, 5 minims each oil eucalyptus and oil sweet almonds, manufactured by Parke, Davis & Co. I shall be glad to receive reports from physicians who shall try this product.

Pittsburg, Pa.

ABSCESS OF NASAL SEPTUM.

BY W. C. GATES, M. D.

G. M. Laborer, æt. 41. States that he had taken cold three weeks before coming to me, and that he had been unable to breathe through his nose since.

Taking him at once to the dark room I proceeded to examine his nose, using an Ingall's nasal specum. The mucous membrane was greatly inflamed, but I could see the pharynx throngh either nostril, and was therefore at a loss to account for the symptoms. A thorough application of a five-percent. solution of cocaine gave no relief.

Taking him to a lighted window, I lifted the tip of the nose and examined without the aid of a speculum and at once discovered the cause of the trouble to be an abscess of the septum, causing complete occlusion of the anterior nares. The blade of the speculum would press the bulging mucous membrane to one side, and it was thus overlooked when examining with a speculum.

When opened several thimblefuls of pus escaped, giving complete relief. Two days after he came back with the same old trouble, after opening it this time I washed it out with hydrogen peroxide and inserted a small drainage-tube, when it healed without trouble.

Correspondence.

A CASE FOR DIAGNOSIS.

Editor MEDICAL AGE:

I wish to report a case, and would like assistance in its treatment.

March 4th, 1891. Alice S., age 6, a strong, fine-looking girl up to present illness. I was called to the house to see the grandmother. I noticed the little girl limped slightly, and was told she had walked with a slight limp for about six weeks. I also found she suffered from complete non-retention of urine. I had the child stripped naked, laid her out on a dining table, and made the most careful examination I am capable of. I found the left femur three-fourths of an inch longer than the right, and that it was the left leg she favored in walking. I could find cause for this in the extra length of the femur. There had never been any pain or swelling. I examined all the vertebræ for spinal tenderness; also the knee and hip-joints, manipulating them in every way without obtaining one particle of information. Appetite good, sleeps well, plays out-doors all day. I gave fluid extract rhus toxicodendron three times a day for the enuresis, and cured it perfectly in three weeks. I ordered a high, solid shoe for the right foot, but it was not obtained. The urine never gave me any information, though often examined. After about three months she began to have pain in the left knee. I now expected to find incipient hip-joint disease, but did not. The knee swelled, was red, and there was some exudation into the joint. I gave soda salicylate, tincture colchicum, potassium iodide, and other anti-rheumatics. After about a month, in which pain was more or less continuous, it ceased. I again examined her naked, and was surprised to find the femurs very nearly of a length. At this time she began to lose control of the extensor muscles of the leg. I carried a small faradic battery to the house, and applied the current to the muscles of the leg and thigh for three weeks, every other day. Result *nil*. I showered the leg with hot water and with cold water, made passing movements, used massage, all without a particle of benefit. Her general health was still good. She hops around by the aid of a chair, and is bright and cheerful. In October pain appeared in the other knee, so that she was confined to a rocking-chair. I found two grains of acetanilid controled the pain and gave her good rest at night. This attack lasted a month, and exhausted the skill of several professional friends, as well as my own. The pain finally ceased, the swelling disappeared, and my little patient was again comfortable, but unable to walk or stand, and so she remains to-day. The nutrition of the limbs has kept up remarkably well, and her general health is fairly good. We are now in the midst of our rainy season, so she is not able to sit out-doors, and suffers to some extent from want of occupation. Before a storm the knees will often pain her, and sometimes the ankles too. It looks like rheumatism, but anti-rheumatic remedies do not benefit her. I am in the habit of giving medicine with a special object, and so give enough. In over twenty years I have never met such a case, and own myself puzzled. If any of the readers of the AGE can help me out I shall be grateful.

FRED HUTCHINS, M.D.

Jackson, Amador Co., Cal., Feb. 16, 1891.

DETERMINATION OF SEX.

Editor MEDICAL AGE:

In regard to the unsettled yet ever-interesting question of sex at will, Dr. Lussier, in his article in THE AGE, goes contrary to the Bible theory, for in it the male is regarded to have come from the right side, while the Almighty—certainly a superior authority—brought our female progenitor from the left side.

I will say, however, that having examined such cursory accounts of experiments as are accessible to me—Tilghman's excepted—I cannot say that they disprove the following homely theory:

There are four kinds of offspring which experimenters for sex do not appear to have recognized, viz., male and female which resemble the male parent, and male and female which resemble the female parent. Now, if each parent is capable of producing male and female germs, whether from different

ovaries and testicles or not, we may suppose that a male germ of the male parent uniting with a male germ of the female parent will produce male offspring resembling the male parent; that a maternal female germ uniting with a paternal female germ produces female offspring resembling the female parent; it being supposed in the above two cases that each parent is capable of producing the most vigorous germ of its own sex, thereby influencing both the sexual, facial, and corporeal characteristics of the offspring. In the second two cases we have, first, a paternal male germ uniting with a maternal female germ and producing a male resembling the mother, and, second, a maternal male germ with a paternal female germ producing a female resembling the father; the parental vigor may be an element in affecting the vigor of the germ, and consequently of the sex in the last two cases.

The Creator doubtless intended the sexes to be equal in numbers as they naturally should be, and has placed their ordering beyond the whims and tampering of men to alter.

H. RICE.

Arcadia, Fla., Feb. 20th, 1892.

TO STOP TRANSPORTING DIPHTHERIA CORPSES.

OFFICE OF THE STATE BOARD OF HEALTH,
LANSING, MICH., March 10th, 1892.

Some of the railroads are issuing, to local agents and health officers throughout Michigan, notices that the State Boards of Health of Pennsylvania, Ohio, Illinois, and Iowa have positively forbidden the transportation of bodies dead of diphtheria; and as in diphtheria death is so often due to "heart failure," the railroad agents are directed to refuse to receive, for transportation in or through the above-mentioned states, any body dead of diphtheria, or of "heart failure," unless the certificate or transit-permit states plainly that the heart failure was not due to diphtheria or any other contagious disease.

Inasmuch as diphtheria is one of the most dangerous contagious diseases in the Northern States this action will probably save many valuable lives, by lessening the spreading of the disease.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

B. W. PALMER, A. M., M. D., Editor.

—PUBLISHED BY—

GEO. S. DAVIS, Medical Publisher, Box 470.

DETROIT, MICH., MAR. 25, 1892.

Editorial.

THE DISTINCTION BETWEEN INFECTION AND CONTAGION.

The editor of the Medical News, February 20th, comments on the confusion that exists, even in the medical mind, as to what specifically constitutes infection and contagion, and in what respect they differ.

In illustration of the contradictions and indefiniteness of lexicographers, he quotes at length from the works of Billings, Foster, Webster, The Century, and Fagge's Practice of Medicine, and cites the opinion of Dr. T. Mitchell Prudden, the histologist and microscopist.

He points out a method of definition which, if adhered to, would tend to do away, to some extent, with the existing confusion, and which is well worthy of consideration and adherence.

Etymologically the word *contagion* implies contact, touch, physical taking by one person from another of the *materies morbi*. But, of course, even that act may have a multitude of methods and degrees, and, when a closer scrutiny is attempted, there is found to be no essential difference between receiving the pathogenic matter from another by touching him, or the things that he has touched, and the transfer of the matter by a fly, by water, or by wind. The innumerable methods whereby the pathogenic material may be carried make it impossible to devise a nomenclature that shall express each variety of transfer. And yet it is precisely this idea of the method of transfer that has introduced the confusion complained of, and that makes it desirable to delimit the significations of the two words.

So far as we have now reached, it becomes most desirable to determine whether pathogenic material may be transported by the air

or not. In the prophylaxis of disease this is an extremely important point. If, *e. g.*, pathogenic material may be transmitted through the air, it is of the greatest importance to know the fact; but if not, then preventive measures are more easily instituted and made effective.

The word infection is, etymologically, not rigidly physical in its significance, and, in actual usage as well as in figurative meaning, it has the significance of more subtle and mysterious processes than those of the physical contact implied by the word contagious. May we not act upon this hint and conveniently limit the word *contagion* to those germs or that material not transportable by the atmosphere, and *infection* to that material that lives and is conveyed by aërial currents?

Such a practice would permit both words to be used, but would give to each a distinct province and application, and thus avoid the present misunderstanding and confusion. Typhoid fever (unless the germs are later to be proved conveyable by air-currents) would thus be a contagious, but not an infectious, disease; ague would be infectious, but not contagious; while tuberculosis would be both contagious and infectious, etc.

The objection to this suggestion that arises is that we are left without a generic term applicable to all diseases, whether contagious or infectious. But zymotic is such a word, with the widest significance and correctness of application.

Without some such limitation and definition as the foregoing we shall have to drift on, with the three words, contagious, infectious, and zymotic, indiscriminately used, erroneously supposed to have differences of meaning, and giving rise to constant misunderstanding and mystification.

DOES INFLUENZA PROTECT FROM SUBSEQUENT ATTACKS?

The question whether one attack of influenza confers immunity from subsequent infection is receiving much attention. Some recent opinions of observers abroad would indicate that the trend of belief is strongly in favor of an affirmative answer to the question. In a highly interesting contribution upon the features of the present epidemic in Berlin, reported in the London Lancet, Dr. Ruhemann directs especial attention to this question of protection, and affords valuable evidence of it. He aptly remarks that the more gradual evolution and persistent character of the present epidemic, as compared with the rapid and stormy course of the pandemic of 1889 to 1890, have afforded opportunity for more closely studying the characters of the malady, and that it has especially enabled us to recognize more clearly its contagious nature. According to him influenza has prevailed in Berlin ever since the beginning of last September, and he notes how on this occasion the stress of the outbreak has fallen to a far greater extent upon women and children and less upon men than was the case two years ago.

He notes the statement of Dr. Edw. Gray, to the effect that "many persons who escaped the epidemic of 1775 were affected by that of 1782, and many who escaped the latter were affected by the former," as showing that a century ago this question of immunity had not passed unnoticed.

Dr. Ruhemann gives his own experience of 55 families, numbering 193 individuals. In 1889–90 there were 64 cases of influenza among this group, whilst in the present outbreak only 40 have been attacked, and, what is of especial interest, only five out of this number were affected (and that but slightly) two years ago, whilst of the 64 then attacked, only four have again become victims.

Should this prove to be anything like the general experience, it would go far to substantiate a fact that has hitherto been much disputed, even to the extent of declaring that one attack predisposes to another. That one individual may have several recurrences during the prevalence of a single epidemic does not, in Dr. Ruhemann's opinion, militate against the general doctrine of protection, since he thinks many such recurrences may be explained by lack of caution on the part of patients against exposing themselves to fresh infection before they are restored to full health.

THE MEDICAL COLLEGES OF DETROIT.

The annual commencement exercises of the Detroit College of Medicine and the Michigan College of Medicine have been recently

held. The classes indicate that Detroit is growing in importance as a centre for teaching medicine and pharmacy. With its advantages of central location, opportunities for inexpensive living, healthfulness, hospital facilities for clinical instruction, it should become in the future a most popular city for prospective students, and perhaps, (why not?) the seat of an endowed university for the teaching of all branches of the sciences and arts. It has at present many nuclei from which, by combination of resources, such a university might be developed.

But to return to the commencement exercises of the colleges, these were celebrated with great eclat.

The twenty-third annual commencement exercises of the Detroit College of Medicine were held Tuesday evening, March 22d, at the Detroit Rink. Notwithstanding the inclement weather, the large rink was comfortably filled by the friends of the graduating class, gathered to do honor to the new-made doctors and druggists. The platform on which were the speakers and the graduates was tastefully decorated with flags and evergreen plants.

After the overture by Schremser's orchestra, Rev. R. T. Savin offered up prayer. General L. S. Trowbridge delivered an address on the relations of the physician to the public. The degrees were conferred by Honorable Sydney D. Miller, and the address to the graduates was made by Dr. C. J. Jennings.

The graduates from the Department of Medicine were:

S. H. Addison, W. S, Brownell, J. N. Bell, H. M. Crane, J. M. Croman, H. A. Dawley, R. S. Forsyth, N. A. Goodwin, R. B. Honey, P. M. Hickey, L. S. Joy, D. McKay, J. R. McCracken, F. J. McDaniels, J. D. Mathews, J. R. O'Brien, M. Printz, G. R. Pogue, R. Seaborn, A. L. Share, N. M. Spranger, C. F. Spademan, G. G. Speer, C. L. Stewart, and F. B. Walker, of Michigan; G. H. Beal, O. S. Bell, T. A. Corlett, J. E. Campbell, B. A. Corneille, O. Chrysler, G. Fee, F. L. Hoag, F. W. R. Lapsley, T. S. Miller, A. McDonald, S. McKenney, H. A. McEachren, R. J. May, E. Orton, N. T. Shaw, M. M. Smith, T. W. Treharne, and F. Van Sickle, of Ontario; F. P. Eastman. J. K. Gilmore, A. B. Jordan, H. B. Strong, and L. E. Schell, of New York; L. S. Eastlake, of Missouri; R. Howell, of North Carolina; and G. S. Miller, of Illinois.

In the Department of Pharmacy the graduates were:

Augustus Carrier, M. A. Dettling, C. T. Gustin, F. S. Geppert, G. C. Hupp, F. J. Rothacher, Merle Smith, and W. J. Wagar.

The annual banquet following the commencement exercises was held at the Wayne Hotel, and was a brilliant, enjoyable, and profitable occasion. The tables were handsomely decorated, covers being laid for 300 guests. Professor J. B. Book and Professor J. H. Carstens were toastmasters, and addresses were made as follows: "Detroit College of Medicine," by Professor David Inglis; "The Graduates," by Valedictorian Dr. P. M. Hickey; "The Doctor in Court," by Honorable John Atkinson; "The Medical the Noblest Profession," by Rev. Wallace Radcliffe; "Juniors Now Seniors," by W. C. Kitchen; "The Sciences and Medicine," by Professor Samuel P. Duffield; "Pharmacy," by George Suttie; "Class of '94." by T. E. McDonald.

The commencement exercises of the graduating class of the Michigan College of Medicine and Surgery were held in the Detroit Opera House Tuesday afternoon, March 15th, before a large audience. The stage was tastefully decorated with palms.

Dr. William Hamlen, secretary of the faculty, presided. The preliminaries were an overture, prayer by the Kev. Paul Ziegler, and a solo, "O, Happy Day," by the Mendelssohn Quartet. An address was delivered by the Rev. C. B. Spencer, being a comprehensive view of the history of medicine. The Hippocratic oath was administered by Prof. Samuel Bell, M.D. The address by Prof. Hal C. Wyman, President of the Board of Trustees, was on Benjamin Rush, the renowned revolutionary physician and surgeon, and was a scholarly and deserving tribute to this distinguished man, and an inspiring model for the new graduate to have held up to him. The valedictory address was delivered by C. A. Blair, '92.

Following are the graduates:

Charles A. Blair, Michigan; D. A. Titus, Ontario; Sidney J. Bancier, Ontario; W. G. Young, Ohio; Perry L. Fritz, Michigan; Mont. M. Cassidy, Virginia; A. W. McBrayen, Kentucky; David H. O'Donnel, Ontario; E. T. Milligan, Dublin; Emery A. Bechtol, Ohio; Wm. T. S. Gregg, Michigan; Martha Stevenson Leadbeater, Michigan; Galen Oderkirk, New York; William W. Kergan, Virginia; Robert W. Cooper, Ontario; John A. Kergan, Michigan; Edward LaDoucour, Michigan; Frank C. Dunn, Indiana; James W. Squires, Michigan; John Francis Bennett, Michigan; Richard Leuschner, Germany; Martin Victor Meddaugh, Michigan; Eliphalit A. Cornell, Ontario: B. Bertram, Michigan; A. M. Foster, Ontario; R. Q. Snell, New

York; Caryl B. Storrs, Michigan; C. J. Annes, Michigan; William Keith, England; Washington Foster, Michigan; R. J. Hamlin, Michigan; Robertson P. Hamlin, Michigan; George Leuschner, Germany.

In the evening the faculty tendered a banquet at the Wayne Hotel to the members of the graduating class of '92, and to a number of invited guests. Covers were laid for 190. The tables were tastefully decorated with flowers and pyramids of tropical fruit. The toastmasters were Dr. Zina Pitcher and Dr. Samuel Bell, and the toasts and responses were: "Our Guests," Prof. O. S. Armstrong; "The Doctor in the Witness Box," Michael Brennan; "Class of '92," M. Meddaugh, M.D.; "The Doctor in Finance," T. H. Hinchman; "Our Calling," Rev. L. Morgan Wood; "Class of '93," O. N. Rice; "Our Public Schools," B. R. Hoyt, M.D., President of the Board of Education; "The Doctor a Humanitarian," Prof. Dayton Parker, M.D.; "Conservative Surgery," Edward W. Jenks, M.D. The responses were all witty and sparkling with good points.

HYPODERMATIC INJECTION OF SHEEP'S BRAIN FOR NEURASTHENIA.

The neuropathic and neurasthenic will rejoice to know that a French investigator has discovered a new method of combating the conditions existing in the neurasthenic diathesis.

Constantin Paul, at a meeting of the Paris Academy of Medicine, February 16th, 1892, communicated the results of his experience with the hypodermatic injection of a ten-per-cent. solution of the gray matter of a sheep's brain in neurasthenics. The brain was macerated for twenty-four hours in glycerin water, then filtered through Darsonval's carbonic filter, which sterilized it. The resulting liquid was absolutely transparent.

A résumé of the paper of Constantin Paul, appearing in the Boston Medical and Surgical Reporter, affords information as to the methods of procedure, the class of patients subjected to experiment, and the favorable results obtained.

Constantin Paul concludes that "injections of the gray cerebral substance constitute a true tonic for the neuropathic." "The neurasthenic," he adds, "is a patient whose nervous system resembles an accumulator which it is impossible to charge. As long as the disease lasts, the neurasthenic eats to no good purpose, for he cannot transform his food into force. On taking the least exercise, the muscular, nervous, and other forces are exhausted.

"The injection of nervous substance promotes the utilization of foods and their assimilation. The nervous system becomes a condenser which can be charged, and the patient acquires a quantum of forces which he can dispose of at his will. But the nervous force is the first to develop, and this leads to the development of the other forces, and the ability to do work of the muscles and brain."

SEWAGE DISPOSAL.

In a paper on Sewage Disposal in the United States, by George W. Rafter, C. E., appearing in the Engineering Magazine, January, 1892, the author considers the comparative value of the methods of sewage disposal in operation, and summarizes the views which are considered representative of the present state of knowledge of this question.

By reason of lack of cheap labor, broad irrigation will not, generally speaking, be adopted in this country.

Intermittent filtration is the preferable method where a high degree of purity is required and the conditions admit of its use.

Chemical treatment may be used where the object is merely to purify sewage enough to permit its discharge into a stream or other body of water without producing a nuisance.

Chemical treatment alone should never be used where the effluent goes into a stream, pond, or lake used as a public water supply at any point within the influence of the sewage.

Combination treatment by chemicals and intermittent filtration may be used when a high degree of purity of effluent is required, but at greater cost usually than by intermittent filtration alone.

To decide just which method to use in any given case will require the best judgment of a skillful sanitary specialist.

Book Notices.

HISTORY OF MEDICAL EDUCATION FROM THE MOST REMOTE TO THE MOST RECENT TIMES. By Theodor Puschmann. Translated by Dr. Evan H. Hare. Published by H. K. Lewis, 136 Gower St , London, W. C., England.

This able and interesting work is a gain to literature in a threefold sense, being a new history of medicine, to which is made the novel addition of a history of medical teaching; further, the relation of both to the history of civilization is followed up throughout. The author in his preface remarks:

"If I have made use of this opportunity to review numerous errors which have been incorporated in text-books of the history of medicine, and at the same time to bring some truths into prominence which have hitherto not attracted notice, the facts of my book as a contribution to knowledge will certainly not be thereby injured."

The work is arranged in four parts according to epochs. The first deals with ancient times, the first country mentioned being India, "where medicine was first practiced by the priests." The larger the sum of medical knowledge and experience grew, the more was recognized the necessity of conferring the privilege of study on other castes as well, if ability was manifested therefor. Thus a distinct medical class was slowly developed. Detailed information concerning the training of medical men is given in the Ayur-Veda, composed by Charaka and Susruta. The former author advises students as to the selection of teachers whose "precepts are sound—who are clever, dexterous, upright, and blameless." Susruta demands all pupils should receive thorough theoretical and practical training, and acquire surgical dexterity by the puncture of fruits, bladders, etc., and practice of incisions on leather bottles filled respectively with water, mud, and hard clay. Evidently both medicine and surgery received in India the best possible attention, at a period several hundreds of years before our era, considering the general lack of anatomical and physiological knowledge.

The Egyptian physicians early acquired a renown that would be enviable even in our own era. They were continually summoned to foreign countries, and favored members of the court of Darius and Cyrus. Chemitic medical teaching was in connection with the temples and the Mysteries, with mathematics, law, and astronomy as collaterals.

The Hebrews and Parsees are highly commended for medical knowledge, as are also the Greeks, both prior and subsequent to the time of Hippocrates, concerning which much information is given in detail.

Extended reference is made to the Greek school at Alexandria where Hierophylus studied and taught; and stress is laid upon the superiority of this school owing to the fact that the Egyptian monarch placed human subjects at the disposal of the teachers for purposes of dissection, and living condemned criminals for purposes of physiological experimentation.

Then follows an account of the teaching in Italy under the Roman Empire that is both interesting and extensive.

Part II relates to the Middle Ages, and is of transcendent interest, not only in relation to the practice and teaching of medicine, but as a criticism of the part played by Christianity in relation to the learning of Europe and downfall of the old Roman Empire. The rise of Moslem influence and the source of Moslem learning in the translations of ancient Greek, Persian, and Indian writings; the progress of medical science and medical teaching among the Saracens; medicine among the Germans and its teaching in monastic schools; the theme of Salerno, the origin of which is lost in obscurity, and is dated by some in the seventh century, while its reputation stood high in the tenth; the medical school of Montpellier; the academies of France and Italy, and other universities existing in the Middle Ages; the training of physicians in general; the teaching of anatomy and pharmacy; medical examinations; surgery and midwifery; the medical profession and medical literature of this period—are some of the heads of topics dealt with in part, all of which are (but no more than the whole book) instructive and interesting. But all this occupies less than one-half of the 636 pages which compose the volume, the remainder of which is devoted to recent times (sixteenth century and upward) and the final hundred years, detailed notice of which cannot be given.

It may be added that every portion of this interesting volume is full of insight, knowledge, and explanation of the methods of medical instruction pursued throughout the world, and that it is offered in a form that cannot fail to please every reader, whether lay or professional. There is not a dull paragraph to be found, and every sentence attracts by its lucidity of style. The author draws pictures fresh as life, the realistic teachings of which show much resemblance to the sciences of the present day, of the quackish practices and tendencies in the East, and of the habits of students in ancient Egypt.

The translator is equally to be congratulated with the author, for his perfect rendering into most elegant English.

MENTAL SUGGESTION. By Dr. J. Ochorowicz, Professor Extraordinarius of Psychology and Natural Philosophy in the New University of Lemberg. Four double numbers of the Humboldt Library. Price, $1.20. Humboldt Publishing Co., 19 Astor Place, New York.

It is the common belief that whatever of truth there was in the doctrines of Mesmer, Puységur, and other "animal magnetizers," is now comprised under the scientific term Hypnotism; and that the modern school of Charcot and the school of "suggestion" of Bernheim represent the highest attainment in the science and art once studied and practiced by Mesmer and Puységur, and later on investigated by Braid, of Manchester.

This author, however, maintains that hypnotism and animal magnetism, though possessed of superficial resemblances, are radically different from each other in their phenomena and in their modes of production; likewise that the facts of magnetism are incomparably more wonderful and the more worthy of scientific study.

The title of the work, "*Mental* Suggestion," well marks the difference between hypnotism and magnetism; in hypnotism mental suggestion is not to be thought of, but that it exists in animal magnetism is the task of this author to prove. He certainly is in every way competent to treat of the subject, being a learned physiologist, physicist, and psychologist, and he has studied the matter experimentally for years. Apparently he has mastered all the literature of hypnotism and animal magnetism, for his book contains an enormous amount of information nowhere else available, except, perhaps, in the greatest libraries. Just because he has first explored the ground thoroughly on his own account and then sifted the bibliography of magnetism, he is able to estimate the true value of the work of former experimenters, students, and theorizers. It is simple truth to add that no student of human psychology can afford to neglect this most able and brilliant treatise—a work original in its methods as in its points of view, and possessing, moreover, the charms of a consummate literary style—in other words, consummate simplicity and clearness of expression. It is unquestionably the most complete work on magnetism and hypnotism yet written, and no author so well equipped for the discussion has ever attempted it before.

A DICTIONARY OF TREATMENT, OR THERAPEUTIC INDEX, including Medical and Surgical Therapeutics. By William Whitla, M.D., Professor of Materia Medica and Therapeutics in the Queen's College, Belfast. Revised and adapted to the Pharmacopœia of the United States. In one octavo volume of 917 pages. Cloth, $4. Philadelphia: Lea Brothers & Co., 1892.

This book is what it purports to be, viz., an index to diseases and all the most approved remedial measures, medicinal and extra-medicinal, electricity, massage, balneology, surgery, etc. It is alphabetically arranged and well indexed, which makes its extensive fund of information readily accessible and most convenient for reference.

The author has incorporated in this book an epitome of the modern views of the application of well-recognized remedial measures for disease. Those who desire a summary of existing therapeutic knowledge, and who have not at their command a complete library of modern authors, will find this compilation useful. The author is well known as an author, teacher, and practitioner, and is fully competent, in gathering material of this character, to separate the wheat from the chaff.

Notes and News.

The Thirty Grains of Beauty in a Perfect Woman.—

Three white things: the skin, teeth, and hands.

Three black things: the eyes, eyebrows, and lashes.

Three red things: the lips, cheeks, and nails.

Three long things: the body, hair, and hands.

Three short things: the ears, toenails, and feet.

Three large things: the breast, the forehead, and eyebrows.

Three narrow things: the mouth, the waist, and the lower front leg.

Three large things: the arm, the calf, and thigh.

Three delicate things: the fingers, hair, and lips.

Three little things: the head, chin, and nose.

—*Jour. d'Accouchements.*

A Prescription.—

My pallid friend, is your pulse beating low?
Does the red wine of life too sluggishly flow?
Set it spinning through every tingling vein
By out-door work, till you feel once again
Like giving a cheery school-boy shout;
Get out!

Are you morbid, and, like the owl in the tree,
Do you gloomily hoot at what you can't see?
Perhaps now, instead of being so wise,
You are only looking through jaundiced eyes;
Perhaps you are bilious, or getting too stout;
Get out!

Out in the air where fresh breezes blow
Away all the cobwebs that sometimes grow
In the brains of those who turn from the light
To all gloomy thoughts instead of the bright;
Contend with such foes, and put them to rout;
Get out!

—*Philadelphia Medical and Surgical Reporter.*

Candidates for Medical Corps Appointments.—

An Army Medical Board will be in session in New York City, N. Y., during April, 1892, for the examination of candidates for appointment in the Medical Corps of the United States Army, to fill existing vacancies.

Persons desiring to present themselves for examination by the board will make application to the Secretary of War, before April 1st, 1892, for the necessary invitation, stating the date and place of birth, the place and State of permanent residence, the fact of American citizenship, the name of the medical college from which they were graduated, and a record of service in hospital, if any, from the authorities thereof. The application should be accompanied by certificates, based on personal knowledge, from at least two physicians of repute, as to professional standing, character, and moral habits. The candidate must be between 21 and 28 years of age, and a graduate from a regular medical college, as evidence of which his diploma must be submitted to the board.

Further information regarding the examinations may be obtained by addressing the Surgeon-General, Dr. C. Sutherland, U. S. Army, Washington, D. C.

An Improved Method of Performing Artificial Forcible Respiration.—

Dr. J. O'Dwyer, of New York, read before the American Pædiatric Society a description of a device consisting of a set of tubes, which he exhibited, and which are designed to overcome certain difficulties incident to the performance of artificial respiration by establishing direct communication with the lungs through the natural passages.

The set consists of two long tubes—one for children, the other for adults—and five laryngeal tips, the lower portion of the latter being surrounded by grooves to allow the vocal cords to aid in holding them down.

The proximal portion of the long tube has two openings—one for inspiration, to which the rubber tubing connecting with the bellows is attached, the other to be controlled by the thumb of the right hand.

Medical Attendance in the Jury Room.—

The sanctity of the jury-room appears to be so well guarded that, even in case of sudden sickness, a physician may not enter except after due process of law. In the Foss will case, tried recently in Boston, the jury were deliberating, when, late in the evening, one of them was suddenly attacked with what proved to be a stroke of apoplexy. The officer in charge notified the deputy

sheriff, who, not having authority to let anyone into the jury-room, drove across the city and informed the sheriff, but even this official was not high enough to act, and another expedition started in search of the judge. As the latter happened to be at home, the requisite order was obtained to summon a doctor.—*Boston Medical and Surgical Journal.*

The Development of Sections in the A. M. A.—

The committee appointed at the last meeting of the American Medical Association to consider the best means for promoting the prosperity of the sections of the association will hold an adjourned meeting in the Hotel Cadillac, Detroit, Mich., June 6th, at 3 P.M.

Members of the committee are requested to notify the chairman of their intention to be present at this meeting.

The committee would esteem it a favor if each member of the association would communicate, in writing, his or her views concerning the best measures for promoting the development of the sections. Such communications may be sent to the chairman of the committee, John S. Marshall, M.D., 9 Jackson St., Chicago.

The Medical Colleges of the United States.—

The following table has been prepared from the Report of the Commissioners of Education for the year 1888–89:

	Number of schools.	Professors and instructors.	Students.	No. of graduates at commencement of 1889.	Amount of State or municipal aid received within a year.	Benefactions.
Regular	92	1,067	12,338	3,296	$24,820	$87,139
Eclectic	9	116	669	156	.....	5,200
Homœopathic	14	249	1,130	312	25,000	15,004
Physio-medical	1	11	15	5	.....	200
Post-Graduate	7	261	669	25	.....	19,000

International Periodical Congress of Gynæcology and Obstetrics.—

The Belgian Society of Gynæcology and Obstetrics, under the patronage of the Belgian Government, has taken the initiative in organizing "The International Periodical Congress of Gynæcology and Obstetrics," the first session of which will be held in Brussels, September 14th to 19th inclusive, 1892.

All communications pertaining to this Congress should be mailed directly to the American Secretary, Dr. F. Henrotin, at Chicago, Ill., who will promptly furnish all information. All notifications to be forwarded should be received by August 1st.—*Medical News*, March 19th, 1892.

Prescribing Opticians in France.—

According to a recent decision of a court in Hâvre, France, the judge ruled that an optician who gives a patient advice as to the condition of his eyes and prescribes glasses to remedy defective vision is guilty of the illegal practice of medicine, just as if he had ordered remedies or given medical advice without possessing a diploma recognized by the law.

A Suit Against the New York Hospital.—

A suit for damages sustained by a boy patient who was alleged to have suffered amputation of the thigh as a result of mortification of the leg from tight bandaging for fracture has been non-suited upon the ruling that no action for malpractice can hold against a charitable institution which uses every care in the selection of competent surgeons to treat its patients.—*Medical Record.*

The First Lady Doctor in Portugal.—

Senhora A. Cardia, after successfully passing all her examinations and writing a dissertation on hysteria (which she dedicated to Queen Amélie), has been admitted a member of the medical profession in Portugal, and has commenced to practice. She is the first lady doctor in the kingdom.

A Rival to the Keeley Cure.—

A well-known physician, of New York, heretofore in good repute, has discovered a cure for alcoholism which is better than Keeley's, and he has started an institute for treatment.

Regulating Fees.—

The physicians of Passaic, N. J., have formed an association for mutual encouragement, and have adopted a fee bill, according to which they will charge $1.50 for day calls and $3 for night visits.—*Medical Record.*

Therapeutic Brevities.

Dry Nasal Catarrh.—The following answers were given in the British Medical Journal in reply to a correspondent for treatment of the above:

Dr. R. M'C. Service (Glasgow). Try the ointment prescribed by Lennox Browne. I have found it most useful:

℞ Ol. eucalypt., ʒ ss.
Vaseline, ℥ j.
M.

Smear the nostrils well by means of a camel-hair pencil.

Mr. Frederic Vicars (Cadogan Street, S.W.) Examine the condition of the turbinate bones. Try local application of iodine and glycerin:

℞ Iodine, 5 parts.
Iodide of potassium, 10 parts.
Glycerin, 100 parts.

Twice a week with an alkaline lotion of—

Sodæ bicarb, ʒ iij.
Borax, ʒ iij.
Acid carbol, ♏iv.
Glycerin, ʒ iv.
Water, ℥ vj.

With twice quantity of warm water, morning and evening. Iron internally.

Mr. R. Lake, F.R.C.S. (Barnes), writes: After washing the nasal passages with a boracic lotion, apply a 5-per-cent. solution of ichthyol in water thrice daily with a brush.

Benzol in Influenza.—Robertson recommends the employment of benzol in the treatment of influenza—as he has likewise found it useful in the treatment of whooping-cough. The symptoms of the disease are speedily and favorably influenced, and pneumonia seems to be prevented. Benzol can be dispensed in capsules or in mixture, in doses of three minims for children and five minims for adults, every two or three hours. The following formula may be employed:

℞ Benzol. pur., ♏lxxx.
Spts. vini rect., f ℥ ss.
Spts. chloroformi, f ʒ iij.
Mucilag. tragacanth., ad f ℥ viij.

M. Sig.—A dessertspoonful or a tablespoonful at a dose, to be taken in lemonade.

—*British Medical Journal.*

Chaulmoogra Oil and Gynocardic Acid in Leprosy.—Brocq (Journal of Cutaneous and Genito-Urinary Diseases, No. 8, August, 1891) states that gynocardic acid, the active principle of chaulmoogra oil, has been substituted with advantage for the latter at the St. Louis Hospital. Three grammes daily, representing 17. grammes of the oil, may be given. Two to five capsules, of 30. centigrammes each, may be given before food, or five to twenty pills daily containing each four grains of gynocardate of magnesia and one grain of extract of gentian; or ten to twenty capsules, each containing 20. centigrammes of gynocardate of soda, may be given each day. The treatment is said to have had good results in the hands of M. Vidal.

A Cheap Method of Administering Fat.—Dr. Mershinski, by boiling milk and lard together for a considerable time, prepares a liquid which contains a large percentage of fat, one litre (one pint and three-quarters) containing from 130. grammes to 170. grammes. He gives half a litre before rising and another at eleven o'clock. "Breakfast," at one o'clock, consists of carbohydrates; dinner, at five, of nitrogenous matter. Experiments prove that the diet is generally well digested, and that the patient increases in weight. Dr. Mershinski considers this preparation very suitable for hospital and union practice in cases of malnutrition not connected with disease of the stomach, liver, intestines, or pancreas.—*London Lancet.*

Hydrastinin in Uterine Hæmorrhage.—Strassmann (Deutsche medicinische Wochenschrift, Nov. 19, 1891) reports a number of cases of uterine hæmorrhage treated with the muriate of hydrastinin. A ten-per-cent. solution was used hypodermatically in a dose of half a grain to a grain and a half to three-fourths of a grain. It was used daily during the menstrual period and twice a week in the intervals. Metrorrhagias and menorrhagias were much benefited, and bleeding that was present was often cured. He also used the hydrastinin in pearls by the mouth with excellent effect and with no bad results.

Camphor in Influenza.—Long, in British Medical Journal, states he had on an average of over 150 cases a week of influenza under his care. He tried the following formula with such success that he found six doses of it sufficient:

℞ Spt. camph., ʒ ij.
Tinct. lavand. co., ʒ ij.
Spt. chlorof., ʒ j.
Mucilag. tragacanth., ℥ ij.
Aquæ, ad ℥ vj.

M. Sig. ℥ j quartis horis sumend.

Bromide of Strontium in Gastric Troubles.—A great deal has recently been written in the French journals on the therapeutic value of strontium. Germain Sée has, noticing that in cases of Bright's disease digestive troubles were often very much benefited, tried the effect of bromide of strontium in different forms of gastric troubles in doses of from half a drachm to a drachm a day. Different forms of dyspepsia were much benefited by its use. He suggests that the iodide of strontium may with advantage be substituted for the iodide of potassium in cases of heart disease.

Elixir of Cocaine.—Prof. Huchard, of Paris, employs in the treatment of painful dyspepsia, gastralgia, and vomiting the following elixir of cocaine:

℞ Muriate of cocaine, 1. gramme (grs. xv).
Hydrochloric acid, 5. grammes (fl ʒ j¼).
Elixir de garus, 500. grammes (fl ℥ xvj).
Distilled water, 100. grammes (fl ℥ iijss).

A small wineglassful after each meal.

—*Le Bulletin médicale.*

Cascara Sagrada as a Purgative in Children.—This drug has been found to be the most reliable purgative in infants and children. It may be prescibed as follows:

℞ Tr. cascara sagrada,
Simple syrup, āā 10. grammes (fl ℥ ijss).

From one-half to a coffee-spoonful, according to the age of the children.

—*Lo Sperimentale.*

Pruritis Ani.—Dr. Joseph M. Matthews has obtained excellent results from:

℞ Benz. oxide zinc oint.,
Campho-phénique, āā ℥ ss.

M. Apply as often as necessary.

The campho-phénique may likewise be used pure, without detriment to skin or mucous membrane.—*Medical Bulletin*, Feb., 1892.

Cancer Caustic.—Heat sulphate of zinc till water of crystallization is driven off and the sulphate falls into a powder. Add pure sulphuric acid to any desired thickness, that of mortar being preferable. It can be used in all cases unamenable to the knife, and leaves a granulating surface that heals with surprising rapidity.—Stephen Smith in *Medical Record.*

Medical Progress.

Nutrition in Disease.—Drs. Salisbury and Cutter have repeatedly proved that lean beef would stand all the tests of a healthy food, hence its adoption as a basis in their methods of treatment.

In consumptive patients, the presence of the yeast fungus in the blood, and its rapid development when vegetable foods were largely used, has been sufficiently demonstrated, as also that when such patients were placed upon a diet of broiled beef exclusively they rapidly improved, and many entire recoveries are recorded.

Valuable as is the Cutter method, that of finely-chopped and broiled lean beef, there is such an utter aversion to food of any kind in many cases that some modification of the treatment would seem to be necessary. This I advance for two reasons, the first being that forced or over-feeding, by the natural method, cannot be resorted to; and, second, that rectal alimentation, by such means, is out of the question.

Débove, of Paris, has made use of powdered beef in his method of forced feeding (gavage), and described a process for preparing it. Success in the treatment of disease by such means was so marked that it attracted widespread attention; and other physicians of Paris, among them, Dr. Dujardin-Beaumetz, added emphatic testimony in favor of this form of alimentation.

Valuable as is Cutter's chopped beef, and even Débove's powder in both cases the whole burden of digestion rested upon the stomach of the patient, which was in very many cases unable to perform its function.

The powdered meat of Débove was a step in advance of Cutter's chopped beef, experiments showing the digestive assimilation to be as five to one in favor of the former.

It remained, however, for a South American chemist, Dr. Vincenté Marcaño, to discover the ideal process of preparing an almost, if not quite, perfect beef food, which meets all of the requirements of such an aliment, with no objectionable features.

Dr. Marcaño found that the juice of the pineapple furnished a digestive ferment which gave a peptone entirely devoid of bitterness or unpleasant taste, as distinguished from such product when made with animal pepsin.

This product has been placed before the profession in America and elsewhere, under three forms—as Mosquera's Beef Meal, Mosquera's Beef Cacao, and Mosquera's Beef Jelly.

In order to fully understand the value of these preparations, let us make an imaginary visit to the laboratory of Parke, Davis & Co., of Detroit, where the above products are manufactured upon a large scale.

This is about what will be seen:

Here the fresh meat is received. The large wooden cases, looking very much like old-fashioned clothes-chests, give cover to an inner box of galvanized iron, a span of some four inches between the wood and iron being completely filled with broken ice. Raising the lid and scraping away the ice immediately over the iron box, this may be opened, disclosing the meat itself, which will be observed as absolutely lean and freed from all veins and cartilaginous tissue. It is trimmed as closely as human skill will permit, and cut into pieces not larger than an ordinary hen's egg.

We pass from here into the digesting room, and the first thing that attracts our attention is the chopping-machine. This is a worm-screw device which takes the meat at the rate of two tons per hour, and forces it through a plate perforated with holes about one-eighth of an inch in diameter. It comes from this machine looking like finely chopped sausage-meat, and is then carried in tubs to platform-scales to be weighed and then dumped into the digesting kettles. These are four and a half feet in diameter, steam-jacketed, and holding about one thousand pounds of meat each. A rotating paddle, driven by a powerful gearing, dips down to the bottom and is set in motion as soon as the meat is has been thrown in. Steam is now turned on, and in the course of half an hour the hitherto ice-cold meat is raised to a temperature of 120° to 130°.

At this point the pineapple juice is added. Almost immediately the meat is observed to soften, and within a few hours the reeking, red pulp, which originally went into the pan, becomes a gravy-like liquid of a grayish color. As soon as this change has been effected, the temperature of the pan is raised, and the water contained in the mixture is driven off. This yields Mosquera's Beef Meal, by far the most concentrated and palatable representative of lean beef ever presented for the use of the medical profession.

In its manufacture nothing whatever has been taken from the beef except water, neither has anything been added to it; therefore the final product must necessarily represent all that is valuable. Further than that, more than half its substance is in the form of peptone and albumose, the products natural to digestion, and therefore ready for immediate assimilation without further action on the part of the digestive organs, while the balance is so finely divided as to insure its digestion with a minimum of labor. Furthermore, the preparation, containing no water, or scarcely any, is absolutely permanent and not subject to attack of worms or other insects.

In comparing this product with other beef preparations on the market, I cannot do better than to present the following analysis by Prof. R. H. Chittenden, of Yale University, the same being appended to a paper read before the Philadelphia County Medical Society, May 13, 1891, as follows:

PERCENTAGE COMPOSITION OF BEEF PRODUCTS, ANALYZED, 1891.

CONSTITUENTS.	Liebig's extract of beef.	Armour's extract of beef.	Valentine's meat juice.	Wyeth's beef juice.	Bovinine.	Murdock's liquid food.	Johnston's fluid beef.	Arlington Chem. Co.'s beef peptonoids.	Mosquera's beef meal.
Water (at 100° C.)	20.06	14.03	69.31	57.88	81.09	83.99	39.58	6.80	6.68
Solid matter (at 110° C.)	79.94	85.97	30.69	42.12	18.01	16.01	60.42	93.20	93.32
Soluble in water							50.40	48.14	31.26
Insoluble in water	0	0	0	0	0	0	10.02	45.06	62.06
Inorganic constituents	24.04	28.29	11.30	17.52	1.02	0.66	13.52	5.08	4.23
Phosphoric acid (P_2O_5)	9.13	7.28	4.00	3.94	0.03	0.09	3.91	1.40	1.71
Fat, ether extractives	0.91	1.27	0.78	0.85	1.49	0.27	1.20	2.95	13.60
Soluble in 80 per cent. alcohol	55.72	67.92	29.15	35.08			34.10		
Total nitrogen	9.52	8.80	2.08	3.25	2.43	2.29	7.38	4.42	12.30
Nitrogen of insoluble matter							1.46	3.25	7.65
Insoluble proteid matter							9.12	20.30	47.81
Soluble albumin coagulable by heat	0.06	0.68	0.55	0.47	13.98	14.20	0	0	0
Soluble albumoses		0	0	0	0	0	0	5.44	11.09
Peptone	0	0	0	0	0	0	0	1.87	18.34
Total proteid matter available as nutriment	0.06	0.68	0.55	0.47	13.98	14.20	9.12	27.61	77.24
Nutritive value as compared with fresh lean beef (lean beef = 100)	0.30	3.30	2.80	2.40	72.40	74.00	47.20	143.00	400.00

Prof. John Attfield, of London, speaking of Mosquera's Beef Meal, says: "This beef meal contains:

	In 100 parts
Stimulating and flesh-forming nitrogenous matter (nitrogen 1.50)	68.97
Ordinary sweet normal fat	17.53
Normal mineral matter, chiefly phosphates	3.04
Natural moisture	9.26
	100.00

"Ordinary beef contains 77½ per cent. of moisture, this beef meal under 10 per cent.; therefore, one pound of this dried and powdered beef represents, in mere weight, four pounds of the original meat.

"Beef simply dried by heat, and then ground to a meal, contains no flesh-forming material and very little soluble, stimulating nitrogenous material. But Mosquera's Beef Meal, made by myself by the Mosquera-Julia method, that is to say by peptonizing beef, not with the ordinary pepsin of the pig, but with newly discovered pepsin-like ferment of fresh pineapple juice, and drying and powdering to a meal, contained no less than 41⅔ per cent. of non-coagulated albuminoid material soluble in water."

The value of the product under consideration lies in the ready assimilation by the system of the contained peptones, and also the finely divided state of the unaltered portion of the beef.

Physiologists are discussing the question of the value of peptones as real foods. Adamkiewicz experimented largely, also Plosz, Gergyai, and Maly. The three latter concluded that "peptone fulfills in the organism all the functions of ordinary albumen, and is also applied to the formation of tissue." Adamkiewicz attempted to disprove this, but his experiments led to the conclusion (and this conclusion seems now to be unanimous) that "peptones do fulfill in the organism all the functions of the albuminous bodies."

While this may be true, yet, in the writer's opinion, the beef meal presents a combination superior to peptones alone. We have here unaltered albumen, which goes to the repair of the tissues, while the peptones greatly facilitate metabolism.

A writer in the Journal of Balneology, says: "It is clear that peptones, even if in further researches they should be found not to be available for tissue formation, may yet be very valuable nutriments for the sick, being capable of replacing albuminous nutrition for months together, and presenting the manifest advantage of being easily and immediately absorbed. A relatively small addition to the food of unaltered albumen would be necessary to obviate the waste of albumen in the body, as well as to attain an increase of weight." This indication, as already pointed out, is fully met in Mosquera's Beef Meal.

Prof. Woodbury, in speaking of the great value of the preparation just mentioned says:

"I have found it especially serviceable in relieving prostration and the effects of fatigue in elderly persons, in the form of a broth, etc. Also, in the intestinal disorders of the aged, it serves to support life without taxing the weaker or digestive powers. In pulmonary phthisis, I have seen good results in keeping up the vital powers.

"I would especially mention the use of beef meal broth, seasoned with pepper or capsicum, in cases of alcoholic excess, drink-craving and delirium tremens.

"In all cases of fever, where beef-tea was formerly employed, the strength of the patient can be maintained much better with such an easily assimilated preparation as this.

"In cases of infantile prostration or debility, following bowel disorders, it often becomes necessary to stop the administration of milk, and substitute some other form of nourishment. In such an emergency the strength of the little patient can be supported by mixing beef meal with rice-water or albumen-water, and the patient kept upon this exclusively, for days at a time.

"Many cases of rickets are due to insufficient nourishment in early life. The mother's milk may not be sufficient in quantity or of good quality, or the artificial food may be given too much diluted. In such cases, good, immediate results may be obtained and future difficulties averted by a more generous diet, and especially by an easily assimilated nitrogen, containing aliment, such as beef meal."

It may be further stated that in the use of this beef meal the fact that it is not a ready-prepared food must be borne in mind, but that it is a concentrated, predigested representative of fresh beef, and must be treated with some intelligence. It is, however, in its general character, miscible with almost any other food, and may be administered in various ways. For instance, mixed with a little chicken or tomato soup, its presence is completely disguised, and the only care necessary is that the consistency of the broth be sufficient to suspend the insoluble portions of the preparation, which are very nutritious.

It is unnecessary for me to say that the most popular and generally consumed form of prepared beef at the present time is the Liebig extract. This is now made by many of the large beef-packers in this country, and as a convenience in the kitchen will always find a wide application, but it is only necessary to refer to the table of analysis which

pears above, to see how utterly worthless is as a food. Imagine trying to nourish a tient on teaspoonful doses of a preparation which, in actual nutritive value, as compared with lean beef at a standard of 100, is it 0.30.

Beef extract will always find some application in therapeutics as a stomachic stimulant, it beyond this it is absolutely worthless, id the importance, therefore, of a preparation like Mosquera's Beef Meal cannot be verestimated.

A word as to the two other preparations—eef Cacao and the Beef Jelly. The first is mply a mixture of equal parts of beef meal, owdered Dutch chocolate and sugar, which, pon being added to hot milk, makes a most alatable and nourishing beverage, having o "meaty" flavor. This form of the "meal" ill be invaluable in many cases and conditions, not necessary to enumerate.

Beef jelly. This somewhat resembles, in ppearance, the ordinary beef extracts, but iffers materially from them in composition nd effect. It is soluble either in hot or cold vater, forming a most nourishing and reshing "tea." I have given a cupful to atients, after a trying examination or treatnent, with very happy effect.

As a refreshing beverage on a hot day, a umblerful of iced tea, made from this jelly, s very acceptable indeed, as it is so rapidly ssimilated. When very much fatigued, I prefer the tea made with hot water.

For rectal alimentation, the beef jelly would be preferable, in some cases, to the beef meal, on account of its solubility, thus favoring rapid absorption, but either may be used, as the physician directs.

The great advantage of these food products over other preparations of this class lies in their richness in assimilable nitrogenous material, their palatability, and their keeping qualities, three most important considerations.—Abstract of an article by Wm. H. Walling, M. D., in the *Times and Register*, February 6, 1892.

"DENAEYER'S MEAT PEPTONE — A SWINDLE."*—During the course of the last year, extraordinary advertising skill has been exhibited in the attempted introduction of a new peptone preparation from England and Belgium into Germany, under the name of "Denaeyer's Sterilized Liquid Meat Peptone." According to the bombastic prospectus, the preparation contained a proportion of 20 per cent. of meat-peptone, a third pure peptone, and was devoid of all noxious substances. A casual examination of the product, which showed that it by no means corresponded to the claims of its prospectus, prompted us to test somewhat more closely the goods then on the market. A large number of samples of Denaeyer's Peptone, obtained from Germany, Belgium, and Switzerland, served as the basis of this investigation, the results of which were published in full in No. 23 of the Pharmaceutische Centralhalle, and in No. 21 of the Münchener med. Wochenschrift. The Denaeyer peptone did not prove to contain, as claimed, 20 per cent. of dry peptone, but an average of 14.66 per cent.; moreover, the composition was not constant, the content of dry substance varying between 12.05 per cent. and 18.05 per cent. *Real peptone*, that is, peptone in Kühne's sense, was not contained in the preparation, despite the advertisements. On the other hand, boric acid was present in varying and not inconsiderable quantities.

A large part of the dry substance consisted of added lime, so that on cooling the entire product congealed into a gelatinous mass. After learning that L. Crismer in Belgium, and Martenson in Russia, had published similar unfavorable results, and that the latter had even warned the public against the product as a "thorough swindle," we did not refrain from making public the analytical data obtained by us, which naturally constituted a destructive criticism of the Denaeyer meat peptone.

An attempt made by Mr. Denaeyer to refute our statements on their merits, in a scientific periodical (Pharm. Centralhalle, 1891, No. 32) failed completely. Instead of a well-founded rejoinder, he gave only a series of evasions which might all have been carried out *ad absurdum*.

We found, that the Denaeyer meat peptone owes a considerable portion of its dry substance to an addition of lime or gelatin. Herr Denaeyer protests most vigorously; he rather commends this as a special point of superiority in his preparation, since "it contains *the lime in the same gelatinizable form in which it is contained in the meat.(!)*" Mr. Denaeyer, however, overestimates the ignorance of his readers in physiological matters, if he would persuade them that finished lime is contained in meat. The lime-yielding substance of meat, the connective tissue, is, first, insoluble in water. When briefly exposed to the action of peptic ferment on meat, it remains for the greatest part undissolved. Only after long continued peptic

* Abstract of article translated by Joseph Helfman from Martenson, Pharmac. Zeitschrift f. Russland, 1890, No. 22.

digestion, according to the investigations of Kühne, Maly, Uffelmann, Etzinger, and others, is the lime-yielding substance dissolved into a body, *which no longer possesses the property of gelatinizing in cold.* If the Denaeyer peptone were truly a product of pure peptic digestion, it could not contain gelatinizable lime. But as it confessedly possesses the latter, and indeed, in abundance, the fact can be regarded only as evidence of the *intentional* addition of gelatin.

Our opinion of the value of the preparation has been confirmed in all essential points by the information of Mr. Heilbroun. We adhere to our conviction that the Denaeyer beef peptone, which has been characterized in scientific periodical by the severe term "thorough swindle," by no means corresponds to the requirements which should be met by a preparation that is chiefly intended as an invigorant for the sick and the feeble.

The Preventive Use of the Salts of Quinine.—The preventive use of the salts of quinine is a question which has been much discussed, and which is nevertheless of great practical interest to Europeans inhabiting tropical countries. M. Sézary, Professor at the School of Medicine of Algeria, resolutely defends the utility of prophylactic doses of quinine in malaria, and recommends the following method, which has always succeeded: "Take every day at one of the meals 0.15 gramme of quinine, sometimes 0.20, but never more. With this tiny dose, I have during the past three years, in divers very unhealthy districts, maintained the health of entire families, in the midst of neighbors perpetually ill. And not only do the attacks not appear, but the appetite improves, the color of the countenance and the plumpness of the figure return—in a word, there is every appearance of perfect health.

"It is possible that in countries of higher temperature than that of Algeria, in latitudes nearer to the equator, this dose may be insufficient, but in the Department of Algeria, everywhere, and even in the midst of swamps, the daily dose of 0.15 gramme in the majority of cases, or 0.20 gramme at the most, is sufficient to prevent the accesses of fever, and to maintain the appearance of the most perfect health."

This treatment would obviate the waste of time, the dwindling of numbers, and the loss of life which are the usual consequence of extensive public works in Algeria. After reporting a certain number of examples, M. Sézary terminates with the following conclusions:

"In the most unhealthful localities of Algeria, whose unsanitary dangers forbid colonization, or at all events render it dangerous, the daily use of small doses of quinine—about 0.15 gramme—is sufficient to prevent the appearance of fever, and to keep the inhabitants in a state of perfect health. The remedy should be continued as long as the fever infests the locality, generally from July 1st to December 1st. It is probable that the same treatment applied to the dock-laborers and workmen employed in public enterprises would render them also refractory to malaria; in any event, it is worthy of trial by them, and should be essayed by the physicians connected with such undertakings."—*Revue de Thérapeutique.*

Leg Ulcers.—I short time ago I was called to see a lady suffering from ulcers of the limbs, the size averaging from that of a quarter of a dollar to a dollar. The limbs were both swollen to an enormous size; the patient could not bear the weight of her clothes on them. The ulcers first started as small pimples, then festered, breaking open and ulcerating. After making a careful examination and inquiry into the case, I found that there was no specific history of any kind; the patient was a woman 40 years old, and of that class whose surroundings are not purely hygienic by any means.

I advised her to be put to bed, and her limbs thoroughly washed with an antiseptic solution, placing the limbs at rest, and ordered her to be placed on the following treatment. Internally:

℞ Hydrargyri chloridi corrosivi, gr. viij.
Spiriti vini gallici, f ℥ viij.

M. Sig.: A teaspoonful three times daily.

I also directed her to drink freely of sassafras tea. The following I ordered to be painted over the ulcers with a camel's-hair brush:

℞ Tr. iodi,
Potassii iodidi, } āā ℥ ss.
Glycerini, f ℥ iij.

M.

This lady had been treated by a number of physicians for almost a year, and had received no benefit. After using my treatment for two weeks the ulcers have become cicatrized, the swelling rapidly subsided, and the patient has entirely recovered. For the bowels I used an anti-constipation pill of aloes, belladonna, nux vomica, and capsicum. —W. Edgar Holland, M.D., in *Times and Register.*

The Medical Age.

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Original Articles.

SOME CASES OF OBSTRUCTIVE DISEASE OF THE LACHRYMAL PASSAGES AND THE ASSOCIATED INTRA-NASAL LESIONS.*

BY G. E. DE SCHWEINITZ, M.D.

The intimate relationship between diseases of the lachrymal apparatus—that is, of the drainage system of the eye—and various types of inflammatory changes in the nasal mucous membrane is an old story. Indeed, the close association of ocular and naso-pharyngeal disease is not limited to these conditions. The great majority of phlyctenular ophthalmias depend upon some type of rhinitis, and are often the direct outcome of adenoid growths in the pharynx. Many obscure symptoms, which we are wont to describe under the general term asthenopia, have been shown to depend upon intra-nasal disease, and a variety of orbital, ocular, and post-ocular pains are frequently "referred pains;" that is, their origin is from some lesion within the nasal cavity—the frontal sinus, ethmoid cells, or antrum of Highmore. In fact, as Harrison Allen has remarked, a good deal of the success of treatment depends upon a proper attention "to the commonality of the various parts of the cephalic mucous membrane."

The following cases are reported, not because they illustrate new points, but because they emphasize some old ones, and still more because they emphasize that the cure of obstructive lachrymal disease is materially facilitated, not merely by the ordinary measures adopted for rendering the passage patent, in association with what may be called routine intra-nasal treatment (for I take it no one attempts to treat lachrymal disease without due attention to the nasal mucous membrane), but that more radical measures are frequently of value when applied to the nasal chambers and the vault of the pharynx, which in the vast majority of cases are the regions primarily affected.

Case 1. *Purulent Dacryocystitis; Traces of Old Rhinitis and Abnormal Shape of the Lower Turbinated Bone.*—D. D., a boy aged seven years, reported for treatment November 3, 1890. Three years ago pus began to exude from the right punctum lachrymale, and in spite of treatment this condition has continued ever since. The boy was healthy in other respects; he had never suffered from measles nor scarlet fever; was free from the evidences of inherited syphilis, and had sustained no injury. His voice was slightly nasal in tone.

The lower canaliculus was slit, and a firm stricture at the beginning of the nasal duct was evident. The probe was not forced; neither was the stricture incised.

The patient was referred to Dr. Alexander McCoy for nasal examination, who reported as follows: "The right nostril shows an abnormal shape of the lower turbinated bone, also some evidence of a severe rhinitis during the past. I believe that the position and form of the lower turbinated body have had much to do with the disease of the duct on account of the obstruction to its entrance at it lower portion into the nasal chamber. The boy also has a pharyngeal tonsil, which obstructs the posterior nares somewhat." Dr. McCoy undertook the treatment of the nasal condition, and after a few days the stricture was incised, the probe passed, and the usual treatment instituted. When the intra-nasal obstruction was removed, the epiphora ceased, and has not reappeared.

I have referred to this case in a paper on the use of pyoktanin in dacryocystitis (University Medical Magazine, vol. iii, p. 181), and may repeat that my colleague, Dr. Gould, as well as myself, has had satisfactory results with this drug in the treatment of unhealthy lachrymal accretions.

* Paper read before the County Medical Society, Philadelphia, March 23, 1892.

The case is now utilized, however, to illustrate a very important point to which Dr. McCoy calls attention in his report, namely, that, although the stricture of the duct, which in this case existed high up, was penetrated, and although the fluids and the probe passed readily, the epiphora continued because of the malposition of the turbinated bone. Indeed, this sometimes exists only in the form of a small flap of mucous membrane, which closes the entrance of the duct into the inferior meatus very much as a valve would do. This effectually prevents the drainage of the eye, and unless it is removed good results will not follow. In this particular instance it was very easy to see the obstruction by first passing a probe and then exposing the entrance of the duct into the meatus by means of a nasal speculum—a slight precaution which will often lead to the discovery of the cause of a persistent overflow of tears in spite of apparent permeability of the passages.

Case 2. *Catarrhal Dacryocystitis; Bands of Adhesion from the Inferior Turbinated to the Septum.*—Ella H., aged 28 years, reported for treatment at the Philadelphia Polyclinic, October 24, 1891, on account of an inflammation of the right eye, which had existed for several days. There was a small abscess at the inner margin of the lower lid, with a fistulous communication into the lachrymal sac. A free muco-purulent secretion distended the sac in the form of an ordinary mucocele. The canaliculus had been slit at some previous time, but a probe did not pass readily.

She was referred to the throat department, and examined by Drs. Arthur Watson and Walter Freeman, who reported as follows: "Atrophy of both inferior turbinates; unable to obtain a posterior view; former ulceration of the posterior wall of the pharynx; bands of adhesion from the inferior turbinates to the septum, also one from the middle turbinate to the septum on the right side."

Even in the absence of definite history the pharyngeal condition seemed to indicate syphilis. The patient was ordered an astringent lotion, given potassium iodide and bichloride of mercury, and referred to the throat department for treatment. In January of this year an operation was made upon the lower turbinated bone, and the condition has materially improved without the passage of probes, the secretion and the epiphora having materially lessened.*

This case, it seems, illustrates the ordinary intra-nasal lesions which were evidently at the bottom of the lachrymal trouble, and is further interesting because these lesions gave confirmatory evidence of the syphilitic condition, so much so that cure was facilitated by the proper constitutional remedies.

Case 3. *Lachrymal Abscess; Spur on the Septum Opposite the Middle Turbinated Bone; Chronic Pharyngitis.*—Sarah S., aged forty-years, reported for treatment at the Philadelphia Polyclinic, November 24, 1891. In April, 1891, epiphora began in the left eye, for which she seems to have undergone no treatment. It continued until about one week ago, when suppuration of the lachrymal sac took place. When she presented herself there was a very marked lachrymal abscess. The pus was evacuated by an external incision, the sac freely irrigated with an antiseptic fluid, and the patient referred to Drs. Watson and Freeman for an examination.

They reported as follows: "On the left side there is a spur on the septum opposite the middle turbinated bone; also hypertrophy of the tissues. The turbinates are small. There is chronic pharyngitis, a thick phlegm covering the tissues."

Unfortunately this patient has failed to report with any regularity, and the ultimate result cannot be given. The case illustrates the history of so many of these cases, namely, a chronic pharyngitis and hypertrophy and inflammation of the intra-nasal mucous membrane; involvement of the lachrymo-nasal duct; epiphora, owing to an obstruction primarily from swelling of the mucous membrane, and later from the formation of a positive stricture. Under the influence of the pressure and of the stricture, the fluids of the conjunctival sac are not drained, but, distending the lachrymal sac, become infective, an abscess forms, and the condition which has been described results.

Case 4. *Epiphora; Atrophic Catarrh.*—Jane C., aged sixty years, reported for treat-

* Recently there has been a relapse in this case. Attention to treatment has not been regular.

ment at the Philadelphia Polyclinic, November 14, 1891, complaining of pain in her eyes, constant epiphora, and inability to read on this account. There was considerable hypermetropia and some astigmatism, and, as epiphora is frequently caused by the strain of uncorrected ametropia, proper glasses were ordered, but the overflow of tears continued. Both canaliculi were then slit. There was narrowing of the ducts, but no stricture, and probe and fluids passed readily. The epiphora improved, but did not disappear.

She was referred to the throat department, and the following report was received: There is an atrophic condition on both sides, and a spur on the septum on the right side near the opening of the lachrymal duct, but it does not interfere. The closure is probably due to contraction from atrophic changes.

This is a good example of a very common condition, most frequent in elderly people, where there is neither disease of the sac, stricture of the duct, nor pressure from a spur or hypertrophy of the turbinated bodies, but where the obstruction depends upon contraction from atrophic changes.

CASE 5. *Phlegmonous Dacryocystitis; Deflection of the Septum; Spur on the Left Side Pressing on Inferior Turbinated Bone.*—Matthew L., aged twenty-seven years, presented himself for treatment on account of an extensive lachrymal abscess with a small opening and widespread infiltration of the tissues, producing a large swelling involving the lower lid and cheek. The abscess was incised, the pus cavity freely washed out, and an antiseptic dressing applied. In a day or two the swelling had subsided, and nothing remained but a slight brawniness of the tissues and a fistulous opening at the point of incision. The canaliculus was slit, but all efforts to introduce the probe proved futile. The patient had been much exposed to weather; had a history of an old injury, but denied syphilis. The obstruction to the tear passages had existed since the early fall.

He was referred to the throat department, and the following report was received: The septum is irregularly deviated in front; there is a spur on the left side pressing on the inferior turbinated body, which also contains an ulcer in its anterior portion.

He was warned that "catching cold," which would increase the nasal obstruction, would certainly bring about a relapse of the abscess. He went to work, however, and returned a few days afterward with all of the conditions previously described in a very much more aggravated state. The same treatment was instituted, and he was again referred to the throat department, and on the 23d of February the hypertrophy on the left side was removed. On the same day a probe was passed, and since this time its passage has been repeated. Epiphora still continues, but is decreasing day by day.

This case illustrates the mechanism of relapse in many of the tear-passage cases, in this case producing a very serious phlegmonous inflammation. Under treatment and rest, sufficient drainage takes place to produce amelioration of the symptoms; swelling from congestion, owing to exposure, is added to the organic obstruction already present, producing complete closure, with an exacerbation such as has been detailed.

CASE 6. *Stricture of the Nasal Duct; Moderate Hypertrophy of the Inferior Turbinated on the Left Side and a Spur on the Right Side.*—Bridget R., aged fifty years, applied for treatment to the throat department of the Philadelphia Polyclinic, and the following lesions were found: A moderate amount of hypertrophy of the left inferior turbinated near the nasal duct, and a spur on the septum of the right side close to the opening of the duct. With these lesions there were epiphora, most marked in O. D., and slight lachrymal conjunctivitis. She had not been able for a number of months to use her eyes with any comfort. She was referred by Drs. Watson and Freeman to the eye department. The canaliculi were slit, and a stricture was found at the mouth of each sac. A No. 2 Bowman's probe was passed without difficulty.

It is evident that, although there were lesions in the nasal passages, they were not obstructing the duct, but under the influence of the chronic nasal inflammation a stricture had formed in the lachrymal canal.

CASE 7. *Epiphora from Swelling of the Mucous Membrane of the Lachrymo-nasal Duct; Atrophic Rhinitis.*—A. K., an unmarried woman, aged twenty-six years, was referred to me by Dr. Ralph W. Seiss, on account of epiphora of the right eye, which had persisted

for some time in spite of the nasal treatment. There was no swelling of the lachrymal sac: no catarrhal or purulent secretion, but simply an overflow of tears. The general health was good, the eyes not far from emmetropic, and there was neither asthenopia nor headache.

Dr. Seiss has kindly furnished the following report of the nasal lesions: Atrophic rhinitis, presenting the ordinary appearances of tissue-destruction, combined with some odor and much secondary laryngo-bronchitis.

The canaliculis was slit, and a No. 3 Bowman's probe was passed without meeting a stricture, but with a resistance to its passage characteristic of obstruction from swelling of the mucous membrane. After the passage of this probe the duct was irrigated on several successive days with a solution of boracic acid and common salt without, however, passing the canula into the duct. The fluid trickled readily through the nose. The epiphora stopped after a few treatments, and has never returned, although many months have gone by since she originally reported.

This patient represents a common class of cases of epiphora associated with chronic inflammation of the naso-pharynx. A somewhat similar inflammation occurs in the nasal duct, but does not produce a true stricture; the occlusion is from swelling, not from cicatricial changes. In many cases it is sufficient to do what was performed in this case; in others even milder measures suffice. Above all things, this is an example of a class of cases the successful treatment of which I have learned especially from Dr. Risley, by obeying the principle which he was wont to instil not to be too ready to pass probes and canulas, lest their introduction scrape away some of the mucous membrane, and really do more harm than good. It is unnecessary to do more than medicate the swollen mucous membrane with any solution that is suitable; I like boracic acid and common salt very much.

Many more cases might be quoted, but these seven representatives of various classes are sufficient to illustrate the points which I desire to make:

1. A large class of cases exist characterized chiefly by epiphora without catarrhal or purulent secretion, in which the obstruction in the lachrymo-nasal duct depends upon swelling of its mucous membrane, and not upon true stricture. The primary origin of these cases in the great majority of instances is a chronic or subacute post-nasal catarrh. The evident indication is the treatment of the latter condition and the medication of the swollen mucous membrane of the lachrymo-nasal duct, so that it may regain as nearly as possible its natural condition, which it will do without much instrumental interference—an interference that may of itself, if unskillfully performed, be the cause of a cicatrizing band that never originally existed. The last cited case of the series illustrates this class of cases.

2. The life history, if I may so express myself, of many cases of obstructive disease of the lachrymo-nasal duct and the formation of a lachrymal abscess is illustrated by Cases 3 and 6. First, a chronic pharyngitis occurs; later, hypertrophy and inflammation of the intra-nasal mucous membrane, followed by swelling of the lining tissue of the lachrymal duct. Gradually cicatricial changes arise, and a true stricture is formed. The drainage of the conjunctival cul-de-sac ceases; the micrococci natural to the part, and those which readily find access to this region, permeate the contents of the lachrymal sac because this can no longer be emptied; the pathogenic micro-organisms exercise their true function, and suppuration occurs.

3. A number of cases develop, chiefly in old people, in which there is epiphora, again without the presence of pus or muco-pus, depending upon obstruction in the lachrymal duct from atrophic changes, the whole being part of a similar atrophic process in the intra-nasal passages, and generally described under the term atrophic catarrh. The obstruction in these instances is not from swelling—not from stricture—but from contraction. Case 4 of the series is an example in point.

4. A very common cause of an exacerbation of lachrymal disease is due to the pressure of a hypertrophic turbinated body, or similar intra-nasal obstruction, which under treatment has gradually subsided, but which, owing to exposure, swells up again, and exercises its obstructing influence. At once

there is occlusion of the lachrymal passages and recrudescence of the symptoms. The very serious nature of such cases is illustrated in Case 1 of the series.

5. In every case of local disease the physician should be mindful of constitutional causes, and the value of confirmatory evidence by pharyngeal and intra-nasal examination is illustrated in Case 2, an example of constitutional syphilis. Local treatment may be very necessary; local treatment without general medication is ineffectual.

6. Finally, I come to the class of cases in which there exists an obstruction at the intra-nasal end of the duct (it may be trivial), permeable by the fluids used in a syringe, but an impassable barrier to the outflow of tears. Even the slightest obstructions, under these circumstances, may defeat the most classical treatment of lachrymal disease. The ready detection of such a lesion is illustrated in Case 1 of the series.

It has not been my intention this evening to refer to what are the best means of treating lachrymal disease, except in so far as these are implied by the descriptions of the lesions which existed in the examples I have reported. Whether we believe that small or large probes should be passed; whether we class ourselves with those who believe that the probes should not be used at all; whether we are the advocates of this or that antiseptic and astringent fluid; whether we think that strictures should be incised or should not be incised, or whether we believe in the permanent wearing of styles or canulas, it is evident that the rational treatment of the various types of obstructive lachrymo-nasal disease must also include not alone the ordinary intra-nasal treatment with sprays and powders, but a systematic and thorough examination of the naso-pharynx, and, if necessary, the best operative interference known to intra-nasal surgery.

TREATMENT OF FIBROID TUMORS OF THE WOMB BY INJECTION OF ERGOT.

BY J. SCHNECK, M. D.

Fibroid growths in the walls of the womb produce such serious symptoms and cause so great an amount of suffering that I believe any method of treatment which has afforded relief or produced a cnre should be placed before the profession. It has been repeatedly demonstrated that fibroid tumors in the walls of the womb may be either checked in their growth, strangulated until local necrosis is attained, or forced out of the uterine walls by contractions produced by the free and long-continued use of ergot. The methods by which the remedy has been administered are by hypodermatic injections, by the mouth, or by suppositories per rectum or vaginam.

The inoculations of a virus, to prevent or modify threatened diseases, has been practiced for about two hundred years. The most familiar examples are those against smallpox, anthrax, hydrophobia, cholera, scarlet fever, and, finally, tuberculosis. Hypodermatic medication has been on trial for forty-eight years, and is to-day recognized as one of the speediest methods of carrying medicines into the system. The profession has also had extensive experience with injections of various substances into diseased tissues and abnormal growths, as in the treatment of carbuncles, hæmorrhoids, hernia, hydrocele, goitre, nævus, and other vascular tumors. But I have been unable to find any record of a remedy having been injected directly into the morbid growth itself, in the treatment of fibroid tumors of the womb. I have administered it in this manner in several cases with satisfactory effects, and in this communication propose to present a summary of the resuls.

Case 1.—The first case occurred in 1880, in the person of a German woman. She was about fifty-two years old; otherwise in good health; had borne five children, the last twenty years previous. On examination, I found a tumor in the posterior wall of the womb, about the size of a goose egg. It had tilted the womb backwards until that organ was entirely inverted, the os being high up under the pubes, while the fundus and tumor had fallen backwards, and were dangling between the thighs, a constant source of pain and annoyance. I injected half-drachm doses of fluid extract of ergot into the substance of the tumor once a week for two months; at the end of this time the tumor began to suppurate, and in a short time was entirely discharged. After

the suppuration ceased, I replaced the womb, and retained it in position with a large-sized Hodge's pessary, which the patient wore for several months. She is to-day a healthy old lady, and suffers no inconvenience from her former trouble.

Case 2.—I was called in December, 1886, in consultation, to visit Mrs. C. She was then 42 years old; had always lived a quiet, industrious life on a farm. Menstruation commenced at 14 years. She was married at 36, and bore her first and only child in her fortieth year. Menstruation had always been normal up to this pregnancy, but five months afterwards metrorrhagia began, which gradually grew more profuse, although ergot was given freely by the mouth. An examination revealed a well-defined intra-mural tumor in the interior wall of the womb, encroaching on the cervix, and about the size of an ordinary orange. I advised injections of ergot into the tumor. Dr. J. B. Kingsbury, the attending physician, substantially sends me the following report: "I injected half-drachm doses of Squibb's fluid extract of ergot each day for eighteen days; then every second or third day for ten times more, at the end of which time the metrorrhagia had ceased. She has taken ergot irregularly by the mouth ever since, although there have been no indications of hæmorrhage. Menstruation is regular and free, but not abnormal; general health is excellent.

Case 3.—In May, 1888, I was called to visit Mrs. T. She was then in her forty-second year; had always lived on a farm; had borne nine children—the last, two years previous. Menstruation had been unusually profuse since that confinement, except during the last three months, when it had been suppressed. On the day I was called serious hæmorrhage had begun, and in a short time after my arrival she had a miscarriage of twins at about the third month. Hæmorrhage was very free, but was controlled after the womb was emptied. Shortly after her recovery from the miscarriage, metrorrhagia set in, which was not controlled by the free use of ergot by the mouth. About three months after the miscarriage I made an examination, and found a hard tumor about the size of a child's head in the right lateral wall of the womb. By using an aspirator needle I was enabled to inject into its substance half-drachm doses of fluid extract of ergot, which I did once a week for nearly five months; this kept the hæmorrhage under control during this period. At the end of this time the tumor was found to be submucous, lifted up on a thick peduncle, and protruding itself through the mouth of the womb. In January, 1889, five months from the time the injections were begun, I removed the tumor with an ecraseur. It was so large that the wire would not reach over it, so I was compelled to take it away in three portions; hæmorrhage was not severe. The vascularity of the tumor had evidently been greatly lessened by the injections of ergot. The substance of the tumor was soft and friable, and would probably have broken down in suppuration in a short time.

I have not observed any serious effects resulting from these injections. In a few instances a slight chill, accompanied by moderate fever, followed the use of the syringe, but these symptoms subsided in the course of a few hours. I have employed this method of treatment in several other cases, with favorable results so far, but they are still in hand. The most convenient instrument with which to administer the injections is the ordinary hypodermatic syringe, with a long needle. In a few instances I have used a small aspirator as a syringe. I endeavor to place the ergot as near the center of the tumor as possible.

Mt. Carmel, Ill.

THE PROPHYLAXIS OF NEPHRITIS SCARLATINOSA.*

BY DR. ZIEGLER.†

It is universally recognized that in the treatment of nephritis, notably in the acute form, the milk-diet plays an important part, and that a milk-regimen is fairly indispensable to its cure, especially with children who can bear milk in large quantities. Henoch (Lectures on Diseases of Children, 2d. ed., p. 559) recommends rest in bed and a rigid

*Abstract from Berliner klin. Wochenschrift, by Joseph Helfman, Detroit.

†Physician at the Military Orphan Asylum at Potsdam.

diet in the therapy of nephritis, the diet consisting of milk and milk foods, and these he considers imperatively indicated in the more advanced stages of the disease. Senator declares that the milk-cure is what is generally and justly regarded as the dietetic cure of albuminuria. In Baginsky's Text-Book of Children's Diseases it is stated: "Foremost in the treatment of nephritis stands the rigid execution of a pure and abundant milk-regimen, which is borne better by children than by adults, and in fortunate cases accomplishes the purpose without producing further disturbances, say through hydropsia. The gentle diuretic and, on the whole, refreshing action of the milk-nourishment is scarcely obtainable from any other agent."

The author's experience fully corroborates the foregoing, and in uncomplicated cases he scarcely has had need of any other therapy. A purely expectant treatment produced the desired result, consisting in confinement to the bed, care to avoid catching cold, and, especially, in a rigid milk-diet.

He was thus prompted to employ this dietary as a prophylactic measure, hoping to hinder the supervention of nephritis in scarlet fever. The results not only did not disappoint his expectations, but were most gratifying, and, as the literature of the subject, to his knowledge, contained no reports on this preventive use of a milk-diet, publication of his experience seemed warranted.

For the past six years he has put every scarlet-fever patient on an absolute milk-regimen, beginning with the very first day of treatment in cases in which the general condition was little, or not at all, disturbed, and the appetite consequently passably good. In the attacks beginning with serious symptoms and high fever, the entire condition of the patient, with special reference to the anorexia, renders mandatory abstention from all food. Such patients received, first, weak soups and milk diluted with Seltzer or soda water, beginning the milk-diet after the lapse of several days on the return of appetite. The milk was always boiled and the quantity increased according to the necessity of the patient until finally the amount of 1½ to 2 litres was consumed daily, or, with older children, 2½ to 3 litres. With this was given only biscuit or rolls. This diet was continued until the end of the third week of the disease, change to other food being then gradually made. The result in private practice, as well as in the large hospital of the Royal Grand Military Orphan Asylum, at which Dr. Ziegler has officiated as physician since October, 1883, have been very gratifying.

The author does not give details of cases in private practice, owing to the difficulty of making exact observations in such instances; he reports, however, that since beginning to carry out rigidly the foregoing treatment he has not had a single case of nephritis scarlatinosa, nor has he, in fact, observed any urinary disturbance.

With respect to his hospital experience, he bases his assertions upon 198 cases of scarlet fever received for treatment during 1875-1890. Of these cases, 115 were received in the period preceding the introduction of the milk-diet, and 83 cases occurred subsequently thereto. Comparison of the categories shows the immensely favorable influence of this diet.

First epidemic, May to October, 1875, 14 cases. Mild in character; nephritis in two cases supervening in the form of after-disease; favorable issue.

Second epidemic, November, 1878, to January, 1879, 20 cases. Nephritis in almost all cases; three infants died, two from nephritis with dropsy.

Third epidemic, January to March, 1883, 48 cases. Disturbances of urinary secretion in half the number; in many, mild disease of the kidneys with dropsy.

In the fourth epidemic 29 cases were treated between December, 1883, and June, 1884, nephritis occurring in six cases, which latter required an average treatment of 77 days. One nephritic died subsequently from the chronic form of the disease. Thenceforward the milk diet was employed in every instance.

Fifth epidemic, March to May, 1885, 17 cases. A very malignant epidemic in many respects. Despite the complications which supervened repeatedly, there was no perceptible albumen in the urine or other symptom of nephritis.

In the sixth epidemic, August, 1885, to January, 1886, 15 cases, there was no nephritis.

In the seventh epidemic, August, 1886, to February, 1887, 30 cases were treated. In several, however, owing to the temporary illness of Dr. Ziegler, the attending physicians failed to prescribe the milk-diet, resulting in two cases of severe nephritis. In this epidemic, therefore, there were three patients treated without the milk-diet, two of whom were attacked with nephritis; 33 with milk-diet, none of whom showed nephritis.

The eighth epidemic comprised 11 cases, from August to November, 1889, all of which proceeded normally without nephritis.

Commenting on the striking disappearance of nephritis after the employment of the milk-regimen, the author maintains that the results cannot be attributed to any cause other than the diet, inasmuch as the other conditions were the same throughout, and the treatment was uniformly only of an expectant nature. This assumption has, moreover, been confirmed by the author's experience in private practice.

In conclusion, the author states that the milk-diet is perfectly well borne, if carefully entered upon, in accordance with the conditions of the patient, and that disturbances of digestion ensued when, after the disappearance of fever, the change was made to a mixed regimen, despite all precaution. The monotony of the food was rarely complained of in the hospital, more frequently in private practice; in such cases the boiled milk was alternated with milk-soup containing oat-gruel, rice, etc.

In practice Dr. Ziegler invariably warned the family that, if they yielded to the patient's solicitation for a mixed dietary, severe disease might be the consequence.

Supplementarily the author reports 20 cases treated between October, 1891, and January, 1892, in which the results confirm his high opinion of the value of a milk-regimen in the prophylaxis of nephritis.

TOXIC ACTION OF SULPHONAL.

BY DR. M. FURST.

Sulphonal being an hypnotic in great vogue, it is necessary that we give warning of the intoxication which it can produce when employed in certain doses, and that the individual circumstances be taken into account. Umpfenbach has observed, as the result of one or two grammes, palpitations, signs of excitation, and at times malaise and vomiting. The first phenomena of hypnosis are often accompanied with vertigo, lipothymia, and ringing in the ears. We may also observe a sensation of cold, grating of the teeth, which are caused by the diminution of perspiration. But the characteristic sign of the intoxication is the enfeeblement of certain muscular groups, of a paralytic type, with ataxic phenomena; at times the pupil is dilated.

In mild intoxication the peristaltic vomitings and the intestinal secretion are augmented, and diarrhœa may supervene. When the intoxication is more serious, on the other hand, obstinate constipation prevails.

According to Gordon, small doses of sulphonal augment the urinary secretion, large doses diminish it.

Henocque has observed that the venous blood assumes a clear red coloration.

The temperature of the body is depressed, as also is the blood pressure. Cardiac activity is almost always increased in serious cases complicated with ichuria and constipation. Respiration is relaxed.

The exanthema are symmetrical. In certain cases numerous efflorescences have been described—small symmetrical papillæ, dotted, red, dark, etc.

Disturbance of sensibility, enfeeblement or abolition of the cutaneous reflexes, have also been observed, with conservation or increase of tendinous reflexes. At times also there are halucinations, diplopia, visions, mania.

The urine, colored a red brown, contains hematoporphyrine, which may be discovered by the method of Salkowski, based on the precipitation of the coloring matter by the alcoholic solution of chloride of barium. The precipitate, treated with water, and then with absolute alcohol, is thereupon heated with a mixture of ten cubic centimetres of 300 absolute alcohol, and six to eight drops of hydrochloric acid; on filtering, the spectroscope will reveal the lines of absorption.

In the urine will be found, also, traces of albumen and of the renal elements, and a small quantity of unmodified sulphonal, the

greatest part of which is eliminated by the organism in the form of soluble sulphates.

The administration of sulphonal must accordingly be suspended when coloration of the urine is observed and the presence of hematoporphyrine becomes suspected.*

CLINICAL LECTURES.†

BY F. DELAFIELD, M.D.

Diabetes, Complicated with Nephritis.—This young man is 27 years old. Seven years ago he had an attack of meningitis, followed by temporary blindness. Five years ago he had an attack of typhoid fever. After that he was in good health until October 1, 1889, when he began to suffer from thirst, attacks of vomiting and diarrhœa, with loss of flesh and strength. He was first seen about the middle of October, 1889; at that time he was passing large quantities of urine, containing sugar. In addition to the diabetes, he was troubled more or less by difficulty in breathing. His treatment, since he has been under observation, has consisted of opium and arsenic, with a regulated diet and some of the other ordinary remedies of diabetes. At the present time the quantity of his urine varies between nine and twenty pints daily; the specific gravity is from 1.020 to 1.024; it always contains sugar. He has had boils from time to time, and has occasional attacks of dyspnœa.

Upon examination we see that there is considerable falling in of the chest both above and below the clavicle; there is no resonance above the clavicle, showing that the apices of both lungs are retracted, probably due to some inflammatory process. There is some evidence of emphysema. The pulse is increased in frequency; the wall of the radial artery is a little thickened. The heart is not much enlarged; there is no murmur.

You must always bear in mind that a patient with diabetes may be suffering with other morbid conditions as well. One condition especially is not very infrequent, viz., they may have a chronic nephritis, without exudation, and, as a result of it, they may pass an increased quantity of water with low specific gravity. If at the same time they have diabetes, there are then two reasons instead of one for the increased quantity of urine; as for the specific gravity, it is diminished so far as the chronic nephritis is concerned, and increased by the diabetes. When you see a patient who is passing an increased quantity of water, containing a considerable amount of sugar and yet of low specific gravity, you must suspect that these two conditions co-exist. You do not expect to find albumen, although it may be present occasionally. The same is true of casts. You look at the condition of the heart and arteries. If, without any valvular lesion, the heart is hypertrophied; if the walls of the arteries are thickened and there is increased tension, it helps confirm your diagnosis of chronic nephritis. In this patient, these conditions are present in a moderate degree. I presume that he is suffering from a chronic nephritis, in addition to the diabetes. As regards the treatment, it is evident that the diet and medicine have by no means removed the sugar from his urine. That being the case, I should not think it wise to trouble him a great deal with medicines. He must continue with the regulated diet. He probably would be better off for taking some cod-liver oil, in addition to his ordinary food. The attacks of dyspnœa from which he occasionally suffers can be accounted for by the emphysema, or by the condition of the heart and arteries.

Localized Peritonitis.—This man is 39 years old. He states that he is suffering from occasional attacks of constipation, and that he is losing flesh and strength. His urine has a specific gravity of 1.025; no albumen. His color is fair; he does not look like a man suffering from a malignant disease of any kind. The liver and spleen are not enlarged. Upon palpation, I find a tumor in the abdomen, just above and to the right of the umbilicus; the feel of this tumor is that of coils of intestines bound together by adhesions. There is nothing in this man's history that points to the existence of a previous attack of peritonitis, but we must make up our minds that the same thing is

* Translated from the International Klin. Rundschau.

† Delivered at the Vanderbilt Clinic, New York.

true of the peritoneum as of the pleura; pleuritic adhesions are often found where there has been no history of pleurisy, and the same may occur in the peritoneal cavity, although not so often. I should imagine that this man had a localized peritonitis, which has left behind adhesions, and these have been interfering with the functions of the intestines. If that is the case, one would expect that he could be relieved by proper treatment. Of course, in cases like this, we cannot make a certain diagnosis. If that is the real condition of affairs, we should want him to have every day a sufficient movement of the bowels, without purging him, and for this purpose I should look either to the combination of belladonna and ipecac, or to the use of small doses of castor oil and cod-liver oil taken together. In this particular patient, as he has been losing flesh, but as his stomach digestion is good, I should think the cod-liver oil would be best. For example, a tablespoonful of cod-liver oil, taken about two hours after each meal, adding to each dose five drops of castor oil, and watching its effect on the bowels. If five drops is not sufficient, the dose can be increased to ten or even twenty drops. That is all that I would be disposed to do for a time.

Influenza.—This man was taken sick on Monday evening, three days ago. He had fever and headache and pains in the legs during the night, and the next day he had some running from the nose, with cough and vomiting. His pulse to-day is 116; temperature, 104. His tongue is coated.

This is the ordinary history of the cases of epidemic influenza which are beginning again this fall, just as we had them last year. This is a fair example of a mild attack of the disease. Of course, people vary very much indeed as to how sick a rise in temperature makes them feel. This man only felt the discomfort of the fever during the first night and day, and since then he has been quite comfortable. He has the characteristic headache and pains in the legs, together with a moderate catarrh. These people should not expose themselves as this man has done. In treating these cases of influenza, we must bear in mind the complications of the disease, the most common of which is pneumonia.

Hypotrophic Cirrhosis of the Liver.—This man is 42 years old, a laborer by occupation. He states that he was in his ordinary health until two months ago. He then found that he began to get sick at the stomach, and noticed that his skin was becoming yellow. He was troubled with palpitation of the heart at night. He has continued to work up to the present time. He says that he has not lost flesh. We find him now with the skin still looking yellow, with headache, and with occasional attacks of dizziness. His appetite is fair. He says that his food sometimes sours on his stomach, that he vomits it, and is still troubled with palpitation at night. He appears fairly nourished. He has the physical signs of emphysema, but not bronchitis. The liver is enlarged; we cannot make out whether its surface is smooth or nodular, on account of the thickness of the abdominal muscles. His urine has a specific gravity of 1.018; it contains no albumen; it does contain some bile pigment.

The diagnosis in this case is hypertrophic cirrhosis of the liver. The disease had probably lasted for a longer period than two months, when he first noticed it. The gastritis seems to be due to the mechanical effect of the cirrhosis by causing, first, a chronic congestion, and then a chronic inflammation of the stomach. The interference with the functions of the liver after a time interferes with the nutrition of the patient; how, we do not exactly know. Nor can we account for the slight jaundice. It is not necessarily an ordinary catarrhal jaundice, nor is it necessarily due to an inflammation of the duodenum or common bile duct. It may be caused by the change in the liver itself. The disturbance of the heart's action is simply secondary to the disturbance of the stomach.

As for treatment, for a month at least this man should drink nothing but water. In addition, he should take some alkaline drug every day. The particular prescription which I have been in the habit of giving in these cases is the following:

℞ Sulpho-carbonate of sodium, 4 drachms.
Carbolic acid, 4 grains.
Tr. nux vomica, 2 drachms.
Glycerin, 2 ounces.
Water, 6 ounces.
M. Sig.—One tablespoonful 3 times a day, before meals.

Besides this, the man should be put on plain, wholesome food.

INFLUENZA.—This man, a laborer, is 32 years old. He was in his ordinary health until two weeks ago, when he began to feel chilly, followed by fever, and he has been sick since that time. During these two weeks he has suffered from a severe headache and a certain amount of pain in the throat. He has also a cough and a feeling of prostration. His temperature to-day, taken in the mouth, is 101°. He has a moderate general pharyngitis and a loose cough, but without any physical signs in the lungs.

This is a very good example of one of the more severe cases of epidemic influenza, and yet there is no complication. This is rather uncommon. As we have seen the epidemic this winter, most of the patients suffer from some complication, especially bronchitis or pneumonia. This man is sick from the disease pure and simple, and it has now lasted two weeks. It is by no means safe for him to be out-of-doors. Such patients should remain either in bed or, at least, in the house, and it is this class of patients who really seem to demand treatment for the disease, as such. Ordinarily the disease runs its course in three or four days, and that is the end of it, no special treatment being called for. In spite of all the information that has been given to us in the newspapers, I doubt if we yet have a specific for the disease. The best thing to do is to keep the patients in the house, partly on fluid and partly on solid diet. The remedy that seems to give them the most comfort is phenacetin; it must be given (to adults) in 5-grain doses every two hours for a number of days. It seems to relieve the headache, the patient is rendered less wretched, and is able to get more sleep.

DROPSY.—This man is 40 years old. He was taken sick seven months ago with a fever of some kind, which lasted altogether for six weeks. He was in bed for that time. He says the physician pronounced the fever malarial, but it is not necessary for our present purpose to discuss whether it was malaria or typhoid. He now complains of a swelling of the left leg and thigh. This particular condition is much more common in typhoid, and yet it may follow malaria. After he had had the fever two weeks, he noticed this swelling of the left leg, and it has continued up to the present time—nearly seven months. The upper part does not pit on pressure, as in a recent œdematous swelling. The œdema has lasted long enough to produce a certain amount of hypertrophy of the tissues,

This condition is due to an occlusion of one of the larger veins of the leg, followed by dropsy and a gradual increase in the size of the tissues. The œdema does not usually last as long as this. As for treatment, the man should have a steady support for the whole leg, from the foot nearly up to the groin, in the shape of an elastic stocking, which should be worn as long as he is on his feet. In addition, he should have systematic massage and passive motion applied to that leg every day. The thigh and leg should be thoroughly kneaded throughout the entire thickness of the muscle. There is no possible object in medicinal treatment; the condition is a mechanical one, and must be relieved by mechanical means.

CHRONIC MILIARY TUBERCULOSIS.—This woman is 53 years old, and has been ill for about a year. During that period she has had a cough with expectoration, and she has several times raised a little blood. She complains of shortness of breath and an irregular febrile movement, with more or less sweating. She has no appetite, and suffers from occasional attacks of vomiting, brought on by the coughing. She has been losing flesh and strength, and, as we see her now, she is much emaciated and very feeble. Percussion in front gives the resonance of pulmonary emphysema; there are old pleuritic adhesions over both apices; there is sonorous breathing over the upper part of the right lung. Behind, we get exaggerated resonance and sonorous breathing over both lungs, but more marked on the right side.

The diagnosis lies between chronic bronchitis with emphysema, or, in addition to these, the presence of miliary tubercles in the lungs, which give no physical signs. In this case I am inclined to think that the woman is suffering from a chronic miliary tuberculosis, besides the emphysema and bronchitis. In some cases of this kind the differential diagnosis is very important, for a person can hardly be so badly off with

bronchitis and emphysema that you cannot help him to some extent. If, on the other hand, there is added a chronic miliary tuberculosis, then the patient will get worse in spite of all treatment. In the former class of patients the first thing to think about is the feeding. The stomach tube may aid you in giving them larger quantities of food than you could give otherwise. For the bronchitis itself you could use one of the drugs which are beneficial in such cases, such as the tincture of nux vomica, strychnine, potassium iodide, the preparation of turpentine, etc. Then the selection of a proper climate is of great importance—a climate where your patients can constantly be out of doors and get the benefit of the air and sunlight.

Hæmophilia.—This woman is 43 years old. She came to this country six years ago. She was in good health until seven years ago, when she began to have small ecchymoses in the skin, remaining for a variable time. Since that time she has also suffered from nose-bleeds, lasting for about a day, and coming on every second or third month; after such an attack, she usually vomits some of the blood which she has swallowed. Her menstruation is profuse, each period being of fourteen days' duration. Her appetite is fair; bowels irregular. The urine contains a small amount of albumen; the blood has not been examined.

This woman is a good example of a condition which is not very uncommon, and yet concerning which our knowledge amounts to hardly anything. She belongs to the class of "bleeders"; the people who are said to have hæmophilia. This woman bleeds mostly from the mucous membrane of the nose; she bleeds also into the subcutaneous connective tissue, and she has excessive menstruation. In some patients there is bleeding from the mouth or the stomach or other mucous surfaces, or, if the skin is even slightly abraded, such persons will bleed for hours instead of for a few minutes. The blood escapes from the vessels in some curious and unusual way, and yet as to the details of this process we know nothing. Whether it is a diathesis, whether it is an escape of the blood cells through the walls of the vessels, or whether there is a rupture of the small vessels, we do not know. What there is about the blood vessels which should allow the escape of the blood or allow them to become ruptured, we do not know. These patients are not usually in poor health; what poor health they do have is mostly due to the repeated hæmorrhages. The disease does not belong to any particular age; the patients usually begin in childhood as "bleeders," and they continue to be "bleeders" for the rest of their lives. It is a condition which evidently runs in some families. It is usually found that it has come down from generation to generation, and that some members of the family will show this disposition to bleed.

As regards its treatment. Here again our knowledge is limited. If the patients, as a result of the bleeding, have a real change in the composition of the blood, if they have less hæmoglobin and fewer red blood-cells than they should have, then we give them iron, and, generally speaking, the nearer the composition of the blood can be kept to its normal condition, the less likely they are to bleed. As regards the use of internal medication to check the bleeding at any particular time, I imagine the most efficient drug we have is the fluid extract of hydrastis, given in large doses, as the gynæcologists give it as a matter of routine (twenty-drop doses) to check excessive bleeding from the uterus. It is also a fairly good drug for these patients at the time when they show a disposition to bleed. The hæmorrhages into the skin, fortunately, are never of such size as to do the patient much harm. The hæmorrhages from the nose and other mucous membranes are often very serious. Those from the nose can be checked by blocking the anterior and posterior nares; this is an exceedingly uncomfortable procedure for the patients, and it is wise, before resorting to it, to look into the anterior nares and to see if there is not one bleeding point that it is possible to touch with the actual cautery or apply pressure to. If the bleeding follows the extraction of a tooth, it can usually be checked by the actual cautery. If the bleeding comes from the stomach, or the intestines, or the uterus, we must fall back on the hydrastis. The administration of iron can be kept up, off and on, for a long time.

Malignant Lymphoma.—This woman is

35 years old. She states that she was in her ordinary health until last September, when she noticed a swelling on the right side of the neck, just above the clavicle; this swelling has increased in size, and it is now very apparent to the eye. She has not felt quite as well as usual, but she has had nothing definite to complain of. At the present time we find her in fairly good condition. The percussion note on both sides of the chest is normal, but it changes as we get over the upper part of the sternum, and becomes distinctly flat. The urine has a specific gravity of 1.030; no albumen or sugar.

Evidently the disease from which this woman is suffering is connected with the lymphatic glands of the neck, and also with the lymphatic glands of the upper part of the interthoracic cavity. The flatness which we get over the sternum is caused by the enlarged glands in that region. There are no enlarged glands in other parts of the body.

The diagnosis in her case would lie between two affections of the lymphatic glands, viz., a tubercular inflammation of the lymphatic glands of the neck and mediastinum, or malignant lymphoma. Of these two, it is much more probable that she is suffering from the so-called malignant lymphoma, a form of tumor beginning in the lymphatic glands, at first only causing an enlargement of the glands, but afterwards infiltrating the adjacent tissues, as in carcinoma. These tumors are very fatal, and there is a curious want of similarity between the appearance of the patients in the earlier and later stages of the disease. For example, you see this woman now; she is looking very well, her general health is not suffering, and you simply see an enlargement of the lymphatic glands. Within a year this woman, if she is not dead, will be in a most miserable condition. The mass which is growing in her thorax will continue in size. It is so situated that it must necessarily press on the large veins and arteries, on the bronchi, trachea, and œsophagus. As it presses on these, sometimes one and then the other, you get the results of such pressure. If it is the descending vena cava, the head and face will become the seat of venous congestion, the eyelids and lips will swell, etc. If it is the trachea, she will have constant dyspnœa and cough, because the pressure will set up an inflammation of the bronchi. The inflammation will extend downwards, and she will have increased cough and expectoration and dyspnœa. If it is the large arteries at the base of the heart, then the heart is pushed to one side or the other and its action interfered with; so you see what must happen to a person having a growing tumor in the anterior mediastinum.

If this woman had been seen in September, when the growth first became apparent, it is possible that there was nothing then in the thorax; at that time the tumor in the neck could have been taken out and her chances of recovery would have been fair. It is now too late for surgical interference. The only thing that has ever been found to be of service for this condition is the administration of arsenic, and this has only proved beneficial in a small number of cases. The drug must be given in constantly increasing doses, until you get its poisonous effects. You begin, say, with five drops, three times a day, and increase this by one drop each day until you begin to get the evidences of arsenical poisoning—swelling of the eye-lids, griping of the intestines, pain in the stomach, or vomiting. When these symptoms appear, then stop the arsenic for a week and begin over again.

Acute Articular Rheumatism with Pericarditis.—This girl is 17 years old. She tells us that she was quite well until last Friday, when she began to have pain in the right hip, with a feeling of chilliness and loss of appetite. Then the pain went into the back, then into the left hip, and now she has it in both hips. She also has a little pain in the right wrist. She has continued to lack appetite, to feel chilly, with more or less fever, and to-day she has a temperature of 101½°. The heart's action is rapid, and she has a murmur which sounds like a pericardial murmur.

The case is evidently one of acute articular rheumatism with a complication of pericarditis. You can see how some people with this disease make themselves worse than they otherwise would be. If they are working people and do not want to go to bed, they expose themselves in a way which is entirely incompatible with the severity of

the disease from which they are suffering. This girl is out of doors in very cold weather on the seventh day of an attack of this kind. She ought to be in bed, and to remain there until the rheumatism has run its course and the pericarditis has subsided. If she cannot do it at home, she ought to go to the hospital. So far as treatment is concerned, she should be given salicylate of soda, or salicin, or oil of wintergreen.

A TREATMENT OF INFLUENZA.

BY C. M. FENN, M.D.

At the inception of the strange type of influenza known as *la grippe*, coal-tar series were extensively employed. Yet after not a little personal and professional experience with the disease and these vaunted medicines, the writer became satisfied that the effect of the latter was rather to handicap the invalid, and successful recourse was then had to old-fashioned, stimulating remedies, whose names were at least pronounceable, Recognizing the malady as a neurosis of possibly microbic origin, the patient was put to bed, if possible, and his earlier symptoms combatted with a combination of spirits of camphor, lime of opium, and Hoffman's anodyne, *frequently repeated.* Sometimes camphor alone, internally and inhaled through the nose, renders the victim quite comfortable in from 12 to 36 hours. Then follow with such nervous tonics as the phosphates of iron, quinine, and strychnine, and your patient will frequently return to business within the week.

Possibly this genial climate is to be credited with a measure of these results.

BROMIDE OF STRONTIUM IN NERVOUS TROUBLES.

There has always been a vaguely expressed, but generally accepted, opinion that strontium salts participate in the poisonous properties of barium, on account of the close approximation which the two metals hold in their chemical position to the other elements.

The new and precise investigations, however, of Dr. Laborde, Chef des Travaux Physiologiques à la Faculté de Médecine de Paris, have put an end to this legend; the communications made by this *savant* to the French Academy of Medicine and to the Society of Biology have established, once and for all, that, far from being harmful, pure strontium salts (Paraf-Javal) have, on the contrary, a favorable influence on the phenomena of nutrition. The same authority showed that the previous contradictions and errors on the subject of the toxic effects of strontium salts were due exclusively to the greater or less impurity of the commercial products used, containing small amounts of baryta.

Professor Germain Sée, in affirming the absolute innocuousness and remarkable therapeutical action of the strontium salts (Paraf-Javal), in certain maladies, mentions the fact that they were already the subject of an inaugural thesis inspired by the late Professor Vulpian in 1885. Drs. Constantin Paul and Dujardin-Beaumetz are not less positive of the merits of the strontium salts (Paraf-Javal). Dr. Constantin Paul, referring to his experiments, says: "I gave 6. grammes daily of bromide of strontium (Paraf-Javal) to a young girl, suffering from hysterical epilepsy, for two months. The attacks had hitherto returned periodically before the menses, and resisted the regular daily administration of 4. grammes of bromide of potassium. The bromide of strontium (Paraf-Javal) appears to have prevented the attacks, for they have not since recurred."

Dr. Dujardin-Beaumetz found that bromide of strontium (Paraf-Javal) possesses the indisputable advantage of being better borne by the stomach than the other alkaline bromides.

The important position occupied by bromide of potassium in the treatment of nervous diseases is well known, but unforfunately, if administered for any length of time, it provokes intolerance which, in addition to a disturbance of general nutrition, gives rise to symptoms of intestinal septicæmia, followed by cutaneous eruptions, associated with intense depression and cerebral torpor. It is, therefore, eminently desirable to find a substitute, a succedaneum, to use a therapeutical term, for bromide of potassium, a drug in fact which shall possess all its advantages without its drawbacks.

That bromide of strontium responds pre-

cisely to this desideratum has been already proved by the clinical experimentation made; the pure salt in crystalline needles, such as has been obtained by Paraf-Javal, such as is found in the solution prepared by Chapoteau, is soluble in all proportions of water; it is with this salt and this alone, on account of its perfect preparation and absolute purity, that clinical researches have been brought to their present pitch of constancy and precision.

At the *séance* of the Society of Biology (Paris), October 17, 1891, Dr. Ch. Féré, in reporting the results observed in his hospital practice at Bicêtre,* referred to the interesting case of a patient treated with 10. grammes of bromide of potassium daily, in whom the cutaneous eruption persisted in spite of intestinal asepsis. The patient was given the same dose of bromide of strontium (Paraf-Javal), and equally good effects were obtained therapeutically without any undesirable symptoms. Intravenous injections in rabbits have shown that these animals support .85 gramme of bromide of strontium as against .14 of bromide of potassium. This proves that bromide of strontium (Paraf-Javal) is six times better tolerated than bromide of potassium.

Professor Germain Sée says of pure bromide of strontium (Paraf-Javal) that "it never produces any disastrous effect on the stomach even in large doses. It may be taken in doses of 4. grammes (62 grains) at each of the three daily meals. Out of 32 patients suffering from gastric dilatation several have been improved and some altogether cured. I believe that the bromide of strontium (Paraf-Javal) will advantageously take the place of bromide of potassium, and especially the polybromides, in the treatment of epilepsy." (Académie de Médecine, October, 1891.)

The abundant evidence at our disposal proves that the pure bromide of strontium (Paraf-Javal) responds to the same indications as bromide of potassium, over which it has the immense advantage of being admirably tolerated; for, even in large doses, it produces no accidents.

*From Competes-rendus de la Société de Biologie (p. 665).

Correspondence.

NEW YORK LETTER.

Dr. McBurney on "A Neglected Method"—Election of Officers of the Post-Graduate Medical School—Gotham's Youngest Hospital—Cut-rate Quackery—The Pasteur Institute's Report—Rapid Respiration Remarkably Remedied.

At a recent meeting of the New York Surgical Society, Dr. Charles McBurney read a paper entitled "A Neglected Method of Modifying General Anæsthesia." The method consists in placing a broad, elastic tourniquet around each of the thighs as well as around the upper limbs before the ætherization is commenced, thus shutting off from the general circulation a considerable portion of the blood. He has employed this method about ten times at the Roosevelt Hospital with very good results. The patient is usually brought under the influence of the æther in a very short time—in most of the cases within three or four minutes. The trembling of the limbs, so annoying to the operator, especially in operations about the perineum, is entirely absent. The patients usually recover from the effects of the anæsthetic within two or three minutes after the tourniquets are loosened, and in no case has vomiting occurred. Some precautions are necessary. In case a hypodermic is given before the ligatures have been removed, the quantity of the drug must be considerably smaller than the usual dose. The ligatures are first applied loosely, so as to retard only the venous blood; then, when the limbs are surcharged, the bandages are tightened, so as to completely stop the arterial circulation as well. Dr. McBurney then brought a man before the Society, and gave a practical illustration of the method. He stated that until a short time ago he thought the method a new one; since then, however, he has found it advocated in a letter to the New York Medical Journal, published in 1887, by Dr. J. Leonard Corning, of New York, as well as by others. He had therefore changed the title of his paper and called it "a neglected method" instead of a new method.

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At the annual meeting of the New York

Post-Graduate Medical School, the following officers were elected: President, Dr. D. B. St. John Roosa; Vice-President, Dr. Geo. H. Fox; Secretary, Dr. Clarence C. Rice; Treasurer, Dr. L. Bolton Bangs.

***

The Church Hospital Dispensary of the Protestant Episcopal Church of New York has just filed its certificate of incorporation. This adds one more to New York's eighty odd hospitals and dispensaries.

***

An establishment for the cure of alcoholism *à la* Keeley has just been opened in this city. It is called the Chloride of Gold Medical Institute.

The circular issued by the "Board of Regular Physicians" of this concern states that they prepare "dipsomanine" chloride of gold tablets, which will restrain the appetite for drink, etc. They also mention incidentally that they will accept applications for treatment from persons addicted to morphia, opium, chloral, or cocaine, or other drugs that enslave. This is a cut-rate establishment, their figures being considerably below Keeley's.

***

The New York Pasteur Institute, of which Dr. Paul Gibier is Director, has now been in existence for about two years. According to the report issued by the institute, during the first eighteen months the anti-hydrophobic treatment by means of preventive inoculations, as advised by Pasteur, has been applied in 255 cases, with only one death by hydrophobia. The report further states that in these cases hydrophobia of the animals inflicting the bites was evidenced clinically, or by inoculation in the laboratory.

***

A patient was recently exhibited in Dr. Janeway's clinic at the Bellevue Hospital. The man fell off a car three years ago, striking on the back of his head. He remained unconscious for several days; when he regained consciousness he began to breathe very rapidly. His respirations numbered 162 per minute. Outside of the discomfort caused by the rapid breathing, which had continued uninterruptedly for three years, and the consequent dryness of the respiratory tract, the man was in very good health. The diagnosis arrived at was that the man was probably suffering from a lesion of the medulla.

A few days after his visit to Bellevue Hospital, the man called on a priest in Brooklyn, who is reputed to have made some marvelous cures by means of certain holy relics he claims to possess. These the priest employed on this patient, rubbing them over chest, etc. That night the man's hurried respirations ceased, and he has since remained perfectly well. The man states that during his illness he was examined by over eight hundred doctors, and that in almost every case he was informed that he had a lesion of the medulla, and that his condition was probably incurable. Whether, in fact, such an organic lesion existed, or whether it was a case of hysteria or malingering, and how much the imaginative power had to do in effecting a cure, no one is able to say.

COCAINE IN DENTISTRY.

Editor MEDICAL AGE:

I have found that if 5 drops of a 10-per-cent. solution of cocaine injected hypodermatically in the gums, previous to extracting teeth, does not produce unpleasant effect, a very large quantity can be used without danger. In fact, I have used 15 grains hypodermatically of Parke, Davis & Co.'s crystals without any bad results, in extracting 20 teeth at one sitting. As a cautionary measure, it is always well to have nitrite of amyl and whisky near at hand. To prevent nausea, never use cocaine on an empty stomach.

DR. S. A. SMITH, Dentist.

213 N. Rampart St., New Orleans.

A CORRECTION.

In March 25th MEDICAL AGE, in article headed "A Trial of Jambul in Diabetes Mellitus," the name of the author is *Braymer* not *Baymer*.

In second column, page 175, specific gravity *10.00*, should read *10.22*.

In same column, 14th line from the bottom, *Nov. 16th* should read *Nov. 26th*.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

B. W. PALMER, A. M., M. D., Editor.

—PUBLISHED BY—

GEO. S. DAVIS, Medical Publisher, Box 470.

DETROIT, MICH., APR. 11, 1892.

Editorial.

D. HAYES AGNEW.

No life can be pure in its purpose and strong in its strife and all life not be purer and stronger thereby.

Dr. Agnew's death takes from the profession one of its most revered and honored members. His personality, presence, sincerity, honesty, and modesty were such as to endear him to all with whom he was associated. His qualities inspired the confidence of his medical confrères, his patients, and his students, to so great a degree as to make him the most popular and most sought-after consultant, teacher, and operative surgeon, and his contributions to surgical literature established for him a world-wide reputation.

His appointments were many, and his success phenomenal. In 1854 he was chosen one of the surgeons to the Philadelphia Hospital. He originated the Pathological Museum. In 1863 he became Demonstrator of Anatomy and Lecturer on Clinical Surgery in the University of Pennsylvania. In 1870 he was elected Professor of Operative Surgery, and the following year Professor of the Principles and Practice of Surgery. He was one of the Surgeons to the Pennsylvania Hospital and to the Orthopædic Hospital.

While he of late years endeavored to withdraw from active practice, the demands upon him were such as to keep him almost constantly engaged till his last illness.

He was an indefatigable worker, and to this, his personal magnetism, gracious courtly manner, and thoughtful consideration of all are attributed his popularity, eminence, and the universal esteem and regard for him.

CONSERVATISM IN GYNÆCOLOGICAL PRACTICE.

The medical reader who has followed the recent course of discussion concerning operative procedures for the relief of utero-ovarian troubles must concede that there has been a reaction from the furore for operative interference, and that the trend of opinion to-day is to make haste slowly and resort to all practicable remedial measures before subjecting patients to the risk of surgical intermeddling. The question of operative measures to be employed should be carefully weighed in every case. One writer maintains that it is a higher art, a finer science, to restore an organ to moderate usefulness and comfort than to remove it, be it never so skillfully done.

Another concludes, as a result of the testimony of various eminent gynæcologists and neurologists, that patients are frequently more nervous and often develop mental disturbances of various forms, insanity, and epilepsy, after operations for removal of the tubes and ovaries. A beneficial influence is occasionally observed in cases of insanity and epilepsy associated with dysmenorrhœa, or recurring periodically at the menstrual epochs. In the more constant forms improvement is seldom noticed. Hystero-epilepsy is rarely cured, prolonged after-treatment usually being required. Neurasthenia associated with dysmenorrhœa or structural changes of the ovaries is occasionally cured, although in every case of this character treatment should be diligently tried before operative measures are resorted to, and the removal of absolutely healthy tubes and ovaries for neurasthenia, hysteria, etc., is unjustifiable.

Still another authority states that in cases of enlarged and tender tubes he first resorts to rest, vaginal tampons, douches, massage, faradism, and a tonic regimen. Where the tubal swelling is intermittent and is associated with a narrow cervical canal, he uses Goodell's dilator to secure drainage of the uterine cavity. If the damming up of secretions in the tubes is the result of adhesions, he tries to break them up by Schultze's method, provided the sacs contain no pus. To ascertain this fact, he introduces an exploring needle through the vagina. For

hydro-salpinx he advocates the withdrawal of the fluid through the vagina; and for pyo-salpinx, when near the vagina, he opens and drains from below. Where laparotomy is demanded, the recommendation of Martin and of Polk to preserve as much as possible of ovarian and tubal structures should be followed, as by so doing the symptoms may be relieved and the feminine functions maintained.

ARE INEBRIATES CURABLE?

T. D. Crothers, M.D., in a paper read before the English Society for the Study of Inebriety, contends that inebriety is curable. The more recent the case, the more curable; the more complete and thorough the appliances, the greater the certainty of cure. He summarizes the scientific methods of curing drunkards as follows:

First, legislate for their legal control; then organize industrial hospitals in the vicinity of all large towns and cities. Tax the spirit traffic to build and maintain such places, just as all corporations are made responsible for all the accidents and evils which grow out of them. Arrest and commit all drunkards to such hospitals for an indefinite time, depending on the restoration of the patients; also commit all persons who use spirits to excess and imperil their own and the lives of others. Put them under exact military, medical, and hygienic care, where all the conditions and circumstances of life and living can be regulated and controlled. Make them self-supporting as far as it is possible, and let this treatment be continued for years if necessary. The recent cases will become cured, and the incurable will be protected from themselves and others, and made useful and self-supporting.

The curability of the inebriate is far more certain than that of the insane. The liberty of both is equally dangerous; one is recognized, the other is seldom restrained until he becomes a criminal. The moment a man becomes a drunkard he forfeits all rights to liberty and becomes a ward of the State, and should be controlled by it. It is dense ignorance that permits anyone to destroy his life and property by drink on the supposition that he is a free moral agent. The inebriate is mentally and physically sick, and needs the same help as the insane, and the question of care is simply one of adequate means and remedies to reach the disease.

The new pioneers working along these frontier lines of research, looking beyond the dust and conflict of temperance agitation, are fully confident that not far in the future the inebriate will be recognized and cured; and the mysteries of the great drink problem will disappear before the march of scientific truth.

THE PAN-AMERICAN MEDICAL CONGRESS.

The Committee on Permanent Organization issued a circular March 17th, affording further information concerning progress of organization.

Pursuant to the regulations the following general officers were elected, viz.:

William Pepper, M. D., LL. D., Philadelphia, Pa., President.

Abraham M. Owen, A. M., M. D., Evansville, Indiana, Treasurer.

Charles A. L. Reed, M.D., Cincinnati, Ohio, Secretary-General.

In accordance with the wish of the Committee on Permanent Organization as expressed in Special Regulation No. 4, Drs. I. N. Love, A. B. Richardson, L. S. McMurtry, R. B. Hall, T. V. Fitzpatrick, and Charles A. L. Reed met in Cincinnati and signed the legal form of application for Articles of Incorporation of the Pan-American Medical Congress, which Articles of Incorporation were duly issued by the Secretary of the State of Ohio, under date of March 15, A.D., 1892.

At a meeting of the Incorporators held March 15, 1892, the Regulations, general and special, recommended by the Committee on Permanent Organization were formally adopted as the organic law of the Pan-American Medical Congress in accordance with the Laws of Ohio, and all elections had by the Committee on Permanent Organization, in accordance with such regulations, were confirmed and made a part of the laws of the Congress. A copy of these can be obtained from the Secretary of the Committee on Permanent Organization, J. W. Carhart, Lampasas, Texas.

The Incorporators elected fifteen Trustees as follows:

Dr. W. T. Briggs, Tenn.; Dr. Geo. F. Shrady, N. Y.; Dr. P. O. Hooper, Ark.; Dr. S. S. Adams, D. C.; Dr. H. O. Marcy, Mass.; Dr. J. F. Kennedy, Iowa; Dr. H. D. Holton, Vt.; Dr. L. S. McMurtry, Ky.; Dr. N. S. Davis, Ill.; Dr. Levi Cooper Lane, Cal.; Dr. I. N. Love, Mo.; Dr. Hunter McGuire, Va.; Dr. J. C. Culbertson, Ill.; Dr. A. Walter Suiter, N. Y.; Dr. C. H. Mastin, Ala.

Drs. L. S. McMurtry (Ky.), I. N. Love (Mo.), and W. W. Potter (N. Y.) were designated to act as members of the Executive Committee

It is expected to announce the completed organization of the Congress, its sections and auxiliary committees, domestic and foreign, by July 1, 1892.

AMERICAN ACADEMY OF MEDICINE.

The following topics are promised for discussion at the 17th annual meeting of the American Academy of Medicine at the Cadillac Hotel, Detroit, Mich., on Saturday. June 4, and Monday, June 6, 1892:

"Essentials and Non-essentials in Medical Education;" address of the retiring President, Dr. P. S. Conner, of Cincinnati.

"The Value of the General Preparatory Training Afforded by the College as Compared with the Special Preparatory Work Suggested by the Medical School in the Preliminary Education of the Physician;" paper by Dr. T. F: Moses, of Urbana, O.

"Does a Classical Course Enable a Student to Shorten the Period of Professional Study?" Paper by Dr. V. C. Vaughan, of Ann Arbor, Mich.

"The Value of a Collegiate Degree as an Evidence of Fitness for the Study of Medicine;" paper by Dr. L. H. Mettler, of Chicago.

"The Value of Academical Training Preparatory to the Study of Medicine;" symposium by Drs. H. B. Allyn, of Philadelphia, W. D. Bidwell, of Washington, and Elbert Wing, of Chicago.

"The Newer Medical Education in the United States;" symposium by Drs. W. J. Herdman, of Ann Arbor; Charles Jewett, of Brooklyn, and Elbert Wing, of Chicago.

"Some Phases of the State Supervision, of the Practice of Medicine;" paper by Perry H. Millard, of St. Paul.

Members of the profession are cordially invited to be present at the sessions of the Academy.

Book Notices.

THE PRINCIPLES AND PRACTICE OF MEDICINE: Designed for the Use of Practitioners and Students of Medicine. By William Osler, M.D.; Fellow of the Royal College of Physicians, London; Professor of Medicine in the Johns Hopkins University and Physician-in-Chief to the Johns Hopkins Hospital, Baltimore; formerly Professor of the Institutes of Medicine, McGill University, Montreal; and Professor of Clinical Medicine in the University of Pennsylvania, Philadelphia. Sold only by subscription. Prices: Cloth, $5.50; sheep, $6.50; half morocco, $7.00. Appleton & Co., publishers, 1, 3, and 5 Bond Street, New York.

This admirable work is the most scholarly, complete, modern, and scientifically satisfactory treatise on the Practice of Medicine that has been published.

The First Section of the work, Specific Infectious Diseases, includes typhoid fever, typhus fever, relapsing fever, small-pox, vaccinia, varicella, scarlet fever, measles, rubella, epidemic parotitis, whooping-cough, influenza, dengue, cerebro-spinal meningitis, diphtheria, erysipelas, septicæmia and pyæmia, Asiatic cholera, yellow fever, dysentery, malarial fever, anthrax, rabies, tetanus, syphilis, tuberculosis, leprosy, glanders, actinomycosis.

Under the head of Infectious Diseases of Doubtful Nature are classed ephemeral fever, Weil's disease, milk-sickness, Malta fever, mountain fever, and miliary fever.

Constitutional Diseases is the title of the Second Section, and they embrace rheumatic fever, chronic rheumatism, pseudo-rheumatic affections, muscular rheumatism, arthritis deformans, gout, diabetes insipidus, rickets, scurvy, purpura, and hæmophilia.

The Third Section of the work, Diseases of the Digestive System, comprises stomatitis, diseases of salivary organs, diseases of the pharynx, diseases of the tonsils (acute and chronic), diseases of the œsophagus (including acute œsophagitis, spasm of the œsophagus, stricture, cancer, rupture, and dilatations), diseases of the stomach (with methods of clinical examination), acute gastritis, chronic gastritis, neuroses of the stomach, dilatation of the stomach, peptic ulcer (gastric and duodenal), cancer of the stomach, and hæmorrhage from the stomach.

Then follow Diseases of the Intestines, including catarrhal enteritis, diarrhœa, enteritis in children, diphtheritic or croupous enteritis, phlegmonous enteritis, mucous colitis, ulcerative enteritis, miscellaneous affections of the bowels, appendicitis, intestinal obstruction, and constipation.

Under the heading Diseases of the Liver are jaundice (in its various forms), affections of the blood-vessels of the liver, diseases of the bile-passages, cirrhosis, abscess of the liver, new growths in the liver, fatty liver, and amyloid liver.

Diseases of the Pancreas include hæmorrhage, chronic pancreatitis, pancreatic cysts, and cancer.

Diseases of the Peritonæum take in acute general peritonitis, peritonitis in infants, localized peritonitis, chronic peritonitis, new growths in the peritonæum, and ascites.

The Fourth Section of the work, under the heading Diseases of the Respiratory System, considers acute coryza, chronic nasal catarrh, autumnal catarrh, and epistaxis.

Diseases of the Larynx cover acute catarrhal laryngitis, chronic laryngitis, œdematous laryngitis, membranous laryngitis, spasmodic laryngitis, tuberculous laryngitis, and syphilitic laryngitis.

Diseases of the Bronchi include acute bronchitis, chronic bronchitis, bronchiectasis, bronchial asthma, and fibrinous bronchitis.

The subdivisions under Diseases of the Lungs are circulatory disturbances of the lungs, pneumonia, chronic interstitial pneumonia, bronchopneumonia, emphysema, gangrene of the lung, abscess of the lung, pneumonokoniosis, and new growths in the lungs.

Diseases of the Pleura are treated under the sub-headings of acute pleurisy (in its various forms), chronic pleurisy, hydrothorax, and pneumothorax.

This is followed by a section on Diseases of the Mediastinum.

The Fifth Section of the work is devoted to Diseases of the Circulatory System, beginning with those of the pericardium, which include pericarditis and other affections of the pericardium.

Under Diseases of the Heart are endocarditis, chronic valvular disease, hypertrophy and dilatation, affections of the myocardium, neuroses of the heart, and congenital affections of the heart.

Diseases of the Arteries embrace degenerations, arterio-sclerosis, and aneurysm.

The Sixth Section is on the Diseases of the Blood and Ductless Glands, and includes anæmia, lukæmia, Hodgkin's disease, Addison's disease, and diseases of the thyreoid gland.

The Seventh Section of the work takes up Diseases of the Kidneys, and includes anomalies in form and position, circulatory disturbances, uræmia, Bright's disease (acute and chronic), amyloid disease, pyelitis, hydronephrosis, nephrolithiasis tumors of the kidney, cystic disease of the kidney, and perinephric abscess.

The Eighth Section is on Diseases of the Nervous System, the first subdivision being on Diseases of the Nerves, including neuritis, neuromata, diseases of the cranial nerves, and diseases of the spinal nerves.

The second division is on Diseases of the Spinal Cord, embracing affections of the meninges, affections of the blood-vessels, and acute and chronic affections of the spinal cord.

The third division takes up Diseases of the Brain, including affections of the meninges, affections of the blood-vessels, affections of the substance, hemiplegia and diplegia in children, sclerosis of the brain, chronic diffuse meningo-encephalitis, tumors of the brain, and chronic hydrocephalus.

The fourth division is on General and Functional Diseases, and deals with acute delirium, paralysis agitans, chorea, other affections described as chorea, infantile convulsions, epilepsy, migraine, neuralgia, professional spasms, occupation neuroses, tetany, neurasthenia, the traumatic neuroses, and other forms of functional paralysis.

The fifth division includes Raynaud's disease, angio-neurotic œdema, facial hemi-atrophy, acromegalia, and scleroderma.

The Ninth Section is on Diseases of the Muscles, including myositis, idiopathic muscular atrophy, Thomsen's disease, and paramyoclonus multiplex.

The Tenth Section treats of Intoxicants, Sun-Stroke, Obesity, and embraces alcoholism, morphine habit, lead poisoning, arsenical poisoning, ptomaine poisoning, grain poisoning, sun-stroke, and obesity.

The Eleventh Section takes up the Diseases Due to Animal Parasites, and embraces psorospermiasis, distomiasis, diseases caused by nematodes, diseases caused by cestodes, parasitica arachnida, parasitic insects, and pseudo-parasites.

From this résumé of its contents some idea of the scope of this excellent work can be gathered.

We strongly commend it to all progressive physicians who want a safe and reliable guide to the most eligible methods of treating disease, based on intelligent selection of the most advanced, yet truly conservative, and practically helpful modern teaching.

FIRST DECENNIAL CATALOGUE OF THE CHICAGO COLLEGE OF PHYSICIANS AND SURGEONS.

From this announcement it is evident that this college has the courage and independence to take an advanced position among medical educational institutions.

Its requirements for admission are: 1. A credible certificate of good moral character. 2. A recommendation from a physician in good standing who is willing to act as the student's preceptor. 3. A diploma from a literary or scientific school granting the degree of B. S. or B. A., or their equivalent, a diploma from a State Normal School or from a High School which will admit to the State University of the State in which the High School is located, or other satisfactory certificates.

Students unable to meet the third requirement are only admitted on passing a satis-

factory examination in English, Physics, Mathematics, and Latin.

The course of study in the College of Physicians and Surgeons covers four years. Each year consists of a winter term of twenty-six weeks. There is also a spring term of twelve weeks, beginning at the close of the winter session, at which extra clinical and laboratory work may be done, and the important studies of the winter course may be reviewed. Attendance on the spring course is optional. Students are recommended to begin their studies in the spring unless they possess the very best preliminary education.

Students who present evidence of having studied under a preceptor for at least one year, and graduates of Universities from a biological chemical course, and graduates in dentistry and pharmacy from institutions of the first class, may be admitted to this college to complete the course in three years.

The requirements for the degree of doctor of medicine are:

Satisfactory evidence of good moral character.

Satisfactory evidence that the candidate is at least twenty-one years of age.

Four full years of study of medicine under the direction of a physicians or medical college recognized by the Illinois State Board of Health as such.

Attendance upon at least three full winter courses of lectures in a medical college, the last of which shall have been in this institution.

He must have pursued the study of practical anatomy during three sessions, and to the extent of having dissected, at least, the lateral half of the body, and he must present the demonstrators' certificates for the same.

Attendance on two full winter courses of dispensing clinics and two full courses of hospital clinics.

Certificates of having passed all the branches of the first, second, third and fourth year courses.

Payment in full of all fees.

The school year begins the morning after commencement, and continues to the evening of the succeeding commencement. The academic year of 1892–93 begins March 30, 1892, and closes April 14, 1893.

All inquiries in relation to the college should be addressed to Dr. Bayard Holmes, Corresponding Secretary, 240 Wabash Ave. until May 1, 1892, after May 1, 1892, the Venetian Building, Chicago, Ill.

THE MEDITERRANEAN SHORES OF AMERICA: Southern California—Its Climatic, Physical, and Meteorological Conditions. By P. C. Remondino, M.D. (Jefferson). Fully illustrated 176 pages. Extra cloth, price $1.25 net; paper, price 75 cents, net. Published by the F. A. Davis Company. Philadelphia and London. 1892.

Dr. Remondino, in championing the good cause of the California Riviera, is not only thoroughly patriotic, but also succeeds in making for his client a most effective and eloquent plea. As time passes, the logic of events points with constantly augmenting pertinacity to the truth of the theory that there are few pockets in the treasure-box of providence that these great United States have not the combination of. This flatters our patriotic humor, and is the justification of a decent spread-eagleism. This well written and profusely illustrated book is powerful to win from any impartial jury a verdict endorsing the claim that we have in Southern California a climate the equable delights of which yield in nothing to the famed and historic resorts that line the shores of the Mediterranean. It is a work of peculiar interest to such as hold the rigors of the northern winter in dread. The intrinsic interest in its matter and the happiness of its arrangement and phraseology render it well deserving of perusal by all and sundry.

NEW ENGLAND MAGAZINE. Price, $3.00 a year. Send 10c. for a sample copy. For sale on all newstands. Address, New England Magazine, 86 Federal Street, Boston, Mass.

The New England Magazine is an illustrated monthly literary magazine of Boston. It is unique, containing American legends, traditions, history, story and poetry, philosophy and music, science and art.

Among the articles for 1892 are: Stories of Salem Witchcraft; Phillips Brooks; James Parton; Howells' Boston; The Future of Electricity.

You want this carefully edited and finely illustrated literary magazine of Boston,

whether you have any other or not. It treats of American subjects, past and present. Social questions are discussed in its columns. Stories are a prominent feature.

The contents for April are: Surpliced Boy Choirs of America, S. B. Whitney; Content, John B. Tabb; Women's Work in Astronomy at Harvard, Helen Leah Reed; The Micmac Festival in Cape Breton, J. H. Wilson; Life Cycles, Katharine C. Penfield; The Storm Cloud, Celia P. Woolley; A Summer Wooing, George Ethelbert Walsh; He Was Good to the Poor, Allen Eastman Cross; The Smile of Peace, Gertrude Christian Fosdick; Early Visitors to Chicago, Edward G. Mason; A Commonplace Biography, Thomas M. Clark, D.D.; The Lesson of the Years, James G. Burnett; In the Little Old Trunk, John S. Barrows; In Childish Days, Mary T. Earle; Stories of Salem Witchcraft; Winfield S. Nevins; Rouget de Lisle, Wilbur Larremore; Lennette, Ethel Davis; Annals of an Ancient Parish, Rev. William H. Savage; Retrospect, Charles Gordon Rogers; A Family Tree, Mary L. Adams; In a Summer Gone By, Minna Irving; In a Corner at Dodsley's, Walter Blackburn Harte.

THE BACTERIOLOGICAL WORLD AND MODERN MEDICINE: Bulletin of the Laboratory of Hygiene, Sanitarium, Battle Creek, Mich. Edited by Paul Paquin, M.D., D.V.S., and J.H. Kellogg, M.D. Modern Medicine Publishing Company, Battle Creek, Mich. February number. Subscription: $2 per annum; 25 cents per copy.

By virtue both of its typographical neatness and intrinsic interest of subject matter, this infant periodical, only four months of age, has forced already from the scientific public a measure of recognition that many older and more pretentious publications have yet to gain. Artistically illustrated, with an editorial staff comprising some of the most noted and honored names in the scientific world to-day, it already holds a high, and promises to hold a foremost, rank among the great medical publications of the day.

ANNOUNCEMENT OF NEW BOOKS IN PREPARATION.

W. B. Saunders, 913 Walnut St., Philadelphia, announces ready for delivery June 1st, two important subscription works. The first is an American text-book of the Theory and Practice of Medicine, according to American teachers. Edited by William Pepper, M.D., LL. D., Provost of the University of Pennsylvania. To be completed in two handsome royal octavo volumes of about 1,000 pages each, with illustrations to elucidate the text wherever necessary. Price per volume, cloth, $5; sheep, $6; half-Russia, $7.

The second is an American text-book of Surgery, by Professors Keen, White, Burnett, Conner, Dennis, Park, Nancrede, Pilcher, Senn, Shepherd, Stimson, Thomson, and Warren; forming one handsome royal octavo volume of about 1,200 pages (10 x 7 inches), profusely illustrated with wood-cuts in text, and chromo-lithographic plates, many of them engraved from original photographs and drawings, furnished by the authors. Price, cloth, $7; sheep, $8.

A PRACTICAL MANUAL OF DISEASES OF THE SKIN. By George H. Rohe, M. D., Professor of Materia Medica, Therapeutics, and Hygiene, and formerly Professor of Dermatology in the College of Physicians and Surgeons, Baltimore, etc. Assisted by J. Williams Lord, A. B., M. D., Lecturer on Dermatology and Bandaging in the College of Physicians and Surgeons; Assistant Physician to the Skin Department in the Dispensary of Johns Hopkins Hospital. No. 13 in the Physicians' and Students' Ready-Reference Series. In one neat 12mo. volume, 303 pages. Extra cloth; price, $1.25, net. Philadelphia: The F. A. Davis Co., Publishers, 1231 Filbert St.

This book comprises 303 pages devoted to the treatment of diseases of the skin. Its limits do not permit of covering fully ætiology and pathology. Dr. Rohe's wide experience as a teacher enables him to present very clearly the best modern methods of recognizing the conditions causing skin diseases and remedying the lesions they involve.

PRACTICAL MIDWIFERY. A Hand-book of Treatment. By Edward Reynolds, Fellow of the American Gynæcological Society, of the Obstetric Society of Boston, etc.; Assistant in Obstetrics in Harvard University, etc., etc. Octavo, 424 pages, 121 illustrations. Red parchment muslin. Price, $2 50. Published by Wm. Wood & Co., New York. 1892.

This book is not an elaborate theoretical treatise on the theories of obstetric practice, but a record of the views of the author based on a large experience, giving directions for

all the necessary details of labor and treatment of the puerperal state.

While it is dogmatic in expression, its tone inspires confidence, and, unlike many excellent but prosy works, it does not confuse with the presentation of many conflicting theories. Its teaching is modern, and affords a good guide to the principle of midwifery.

BACTERIOLOGICAL DIAGNOSIS—TABULAR AIDS FOR USE IN PRACTICAL WORK. By James Eisenberg, Ph. D., M.D. Translated and augmented with the permission of the author from the second German edition, by Norval H. Pierce, M. D. Published by F. A. Davis Co., Philadelphia. 1892.

In these tables the specific differences of bacteria can be tabulated for ready reference. The book is here and there interleaved where it is considered it would be desired by the investigator to add original notes of his observations.

The work in its original form is largely used in Germany, and the translation will no doubt prove useful to the American profession.

THE YEAR-BOOK OF TREATMENT FOR 1892: A Critical Review for Practitioners of Medicine and Surgery. 486 pages. Philadelphia: Lea Brothers & Company, 1892.

The value of this publication is so thoroughly recognized by the profession that it stands in no need of the canvassing of type to stimulate its sale. It is sufficient to note the fact that the issue for the current year is now out, and to remark, incidentally, that no previous issue has been as copious, as varied and valuable in matter, or as well arranged as that bearing the 1892 stamp. It will make many new friends this year.

TALES FROM TOWN TOPICS No. 3.

The glitter and charm of romantic, not real life, are to be found in the stories that the publishers of Town Topics are sending out in book form under the title "Tales from Town Topics." In the third number of the publication, which has just come to hand, the usual light and fascinating treatment of strange themes distinguishes the fiction that is presented, while the wit is as daring and the poems as excellent as any that have already sprung f om the same fountain-head. Town Topics is published at 21 West 23d street, New York.

Notes and News.

St. Cecilia, M. D.*—

"When Music, heavenly maid, was young."
She diffidently held her tongue
De rebus scientific;
Content her airs alone should please,
Should make the frigid breast unfreeze,
The savage soul pacific.

But Music, now a matron old,
Has waxed proportionately bold,
And starts a choral college,
To cure the body's neediness,
And emulate the R.C.S.
In therapeutic knowledge.

Sweet visions fill the gentle mind,
Gifted with milk of human kindness and imagination.
Of operations on the sick,
Achieved with quaint orchestral trick,
And vocal variation.

What dulcet drugs would be distilled
For those who practice what the guild
So eloquently preaches—
Gavottes to help the man who halts,
And *suites* to take the place of "salts,"
And lullabies of leeches.

A rhythmic *recipe* might read—
"Take first of Brahms one *liebes-lied*.
A *scena* by Beethoven,
'My Pretty Jane,' 'Should He Upbraid,'
A verse of Gounod's 'Serenade,'
With *obligato* woven.

"Add—if the symptoms urgent be—
Some portion of a Mass in B,
An *aria* from 'Norma;'
Perform this programme to the end,
Until the pulse begins to mend,
Th' extremities get warmer."

Specifics doubtless will be found,
Affichés far as "world-renowned."
Sponsored by some Tone-master,
Thus Gluck might cut out *eau de* Dill
And Mendelssohn replace a pill,
And Meyerbeer a plaster.

The "Lyric Lancet" shall relate
How at a monster Wagner-*fête*
(The brass *sempre crescendo*),
One hundred limbs were cleft in twain,
And yet was heard no sound of pain
(*Absit* all innuendo!)

*Apropos of the recent discussion of music as a therapeutic agent, a contributor to the Sharland (Australia) Trade Journal, January 9, 1892, gave birth to this effusion.

But let not some poor *nerves* trust
His too impressionable dust
To treatment so aesthetic
Or St. Cecilia, on the sly,
Might raise her patient to the sky
In manner energetic.

Physicians' Bureau of Service.—

A business house in Chicago has established a physicians' bureau of service and information, which it proposes to make of great value to all members of the medical profession who may visit the Exposition. The firm intends to fit up spacious rooms at which visiting physicians may make their headquarters, and where they will be provided with the facilities for reading, writing and sending and receiving mail and telegrams; can avail themselves of telephone, messenger, livery and express service; can purchase Exposition, theatre, and railway tickets; can have banking conveniences and the service of German, French or Spanish interpreters, and can receive information generally about the sights of the city, as well as the location and rates of desirable hotels and boading-houses. All of these accommodations the firm intends to provide free.

Transmission of Tuberculosis by the Seminal Fluid.—

At a meeting of the Society of Anatomy and Physiology of Bordeaux, Solles (Journal de Médecine de Bordeaux, 1892, No. 5, p. 52) reported the results of experimental inoculation of two guinea-pigs, the one with the fluid expressed from the testicle of a tuberculous subject, and the other with the spermatic fluid obtained from the seminal vesicle of another tuberculous subject. In the first, the induration at the site of inoculation slowly disappeared without involvement of adjacent glands, and the animal recovered. In the case of the second guinea-pig, fatal general tuberculosis developed. The evidence, in so far as furnished by a single case, points to the hereditary transmissibility of tuberculosis.

Quills as Drainage Tubes.—

Quills as drainage tubes have been suggested by Dr. Beach, of Massachusetts, and they have been used by him for the past two years for this purpose. The goose quills are those which are used for the finer grades of camel's-hair brushes. The quills are taken without cutting off the dermal end, and perforated at intervals with an ordinary round leather-punch. A delicate and smooth-pointed tube is thus provided, presenting the maximum lumen and minimum thickness of wall. The tube is made from a natural appendage, and is absolutely unirritating. It can readily be cut with scissors, and is not fragile like glass. It does not undergo any of the irritating chemical changes which are frequently seen where rubber tubes have remained for any length of time. The tubes are preserved in a sublimate or carbolic solution, and are easily sterilized.—*Gaillard's Medical Journal.*

Prescribing Clergymen.—

Guileless clergymen have been frequently charged with supporting patent medicines with their testimonials, but, according to the Medical Fortnightly, March 15, 1892, they are now assuming the rôle of physician. The Fortnightly remarks:

"One of the leading physicians of our sister city, St. Joseph, complains that two ministers of that city, being possessed of more or less medical education, are combining medicine and divinity, and prescribe for the bodily as well as the moral ailments of the members of their respective flocks.

"Clergymen should find enough to do to attend to the duties usually performed by the members of that profession, and should leave the body to the doctor of medicine, confining their ministrations to the immortal parts of man."

The Physician.—

The following is the translation of an epigram written by Cordus in the sixteenth century:

The physician like an angel seems
When he in the sick-room brightly beams,
And like unto a god is he
When he's removed the malady.
But in a different light we view
The doctor when his bill is due;
Our alter'd eyes we at him level
As though he were the very devil.

—Dr. Carl, in *Medical Brief.*

Effects of the Electric Light upon the Eyes.—

The results of an investigation as to the form of artificial illumination best suited to the eye are given in an article in the British American Journal, by Gustavus Hartridge, F.R.C.S. Taking sunlight as the standard of comparison, he finds that the electric light in the incandescent form possesses advantages which no other illuminator can claim, and must be considered, when carefully shaded and judiciously placed, as the best and most satisfactory form of artificial illumination. The arc light is unsuitable for indoor illumination because of its intense brilliancy, unsteadiness, and large proportion of violet and ultra-violet rays, which cause a certain amount of fatigue.

For Cure of Insomnia.—

Repeat twelve times the following:

Like the passionate palm that breathes all the odors of day
To the soul of the night;
Like a river that runs and frets on its turbulent way
To the quiet deep;
Like the swallow, weary of cold, that southward gleams
To her land of delight,
So the heart overfull of its sorrow flows over in dreams
Of compassionate sleep.

—Ruth Johnson, in March *Lippincott's*.

New Hospitals.—

The trustees of St. John's Guild, of New York, have secured a building at No. 157 West Sixty-first Street, for a new hospital for children. The hospital is to be free for all the children of the poor, without distinction as to color, nationality, or creed.

The Scotchmen in Chicago propose to erect a hospital to commemorate their beloved poet, which is to be called the Burns Free Hospital.

Regulating Prescription Pads.—

The New York Medical Record states Walter G. Byrne, an Assemblyman of New York City, has introduced a bill proposing to make it compulsory for physicians to use for their prescriptions blank forms to be supplied by the health authorities. These blanks are to have stubs upon which the physician must write a copy of his prescription.

Therapeutic Brevities.

The Treatment of Impotence.—Dr. Victor v. Gyurkovecky, in the Wiener Medicinische Presse, 1891, reports complete cure by suspension in three cases of sexual neurasthenia. In cases where this condition is the result of gonorrhœa, he anoints his catheter or endoscope with balsam of copaiba to get its effect upon the mucous membranes, makes a thorough examination, and cures the local condition. He has treated with benefit one case, and to no effect one case of masturbation (a most frequent cause of impotence), by hypnotic suggestion. In sexual neurasthenia he has treated two cases by hypnotic suggestion, one to a cure and the other with benefit, although he is yet under treatment. From these cases he concludes that hypnotic suggestion is a powerful remedy for masturbation, pathological pollutions, and the various forms of impotence.

Hypodermatic Use of Quinine in Uncontrollable Vomiting.—A woman, aged forty-two, suffered from persistent vomiting following a febrile urticaria. After several days of futile medication with various remedies, the author remarked that the attacks came on about ten o'clock every morning and ceased about the same hour in the evening. Later, the attacks came on at noon and lasted only six hours. Thinking that there was some sort of a malarial element in the case, he gave quinine hydrochlorate (seven grains) hypodermatically in the retro-trochanteric region. This procedure was followed by immediate relief. A second injection on the day following practically cured the patient.

A second attack in the same patient some time after did not present a distinct intermittent type, but promptly yielded to the same therapeutic procedure.—Hamon in *Le Courrier Médical*, Jan. 9, 1892.

Onanism Cured by Hypnotic Suggestion.—Dr. Bernheimer (Revue de l'Hypnotisme) relates an instance of cure of the habit of onanism, after the first *séance*, in a boy eight years of age, who had practiced the vice for three years. All other treatment, such as bromide of camphor, bromide of potassium, restraining apparatus, baths, special diet, intimidation, threats, etc., had failed. Suggestion during hypnotic sleep was repeated daily for a fortnight, the suggestion being that he would never again have an idea of touching himself either by day or during sleep at night, and that he would, henceforth, be

strong enough to resist all temptation. From the first day there was marked general improvement, gain in weight, and entire freedom from the habit.

One Use for Cocaine.—Reginald Harrison, F.R.C.S., in an article on "Some Urinary Disorders," recommends the use of cocaine as a local application in connection with a variety of small operations on the urethra, such as the passing catheters and bougies, the stretching and dilating of strictures, and the management of various forms of prostatic obstruction where mechanical treatment is a necessity. With a very little trouble and delay, by the injection of a few drops of a 10-per-cent. solution of cocaine by means of a suitable instrument, say, on the face of a contractile stricture, the operation of entering and passing through it with a bougie is in most persons rendered as nearly painless as it is possible.

Internal and Local Treatment of Diphtheria.—The Medical Summary suggests the following: As an anti-toxic no remedy promises so much as mercury biniodide. It should be given in small doses in the form of a solution; a child five years of age can take 1-25 of a grain in the twenty-four hours, dissolved in two ounces of water, a teaspoonful being given at intervals of one hour. As an anti-biotic we have the peroxide of hydrogen, which should be diluted with an equal part of water, and used frequently as a spray for the nose and throat. In the form of a solution, one part to nine of water, it can be given freely internally and used as a mouth-wash.

For Fœtid Breath.—

℞ Thymol, ʒ j.
Borax, ʒ ij.
Alcohol, f ʒ iij.
Distilled water, f ʒ ijss.

M. Sig.—Use several times a day as a gargle.

Or,

℞ Salicylic acid,
Saccharin,
Sodium bicarbonate, } āā gr xvj.
Alcohol, f ʒ j.

M. Sig.—f ʒ in water, as a gargle, several times daily

—*Journal de Médecine de Paris.*

Physostigma in Hiccough.—In a recent issue of the Edinburgh Medical Journal, Mr. Smart calls attention to a case of obstinate hiccough from chronic alcoholism, so persistent as to prevent sleep and the ingestion of food. Another case of hysterical hiccough, of three months' duration, that had resisted all other agents, was speedily controlled in the same way. A good fluid extract was the form given. The dose is four to eight drops every two or three hours, pushed to the point of causing toxic symptoms.

Nitrate of Silver in Rhus Poisoning.—Many cures for rhus poisoning have been put forward and highly recommended; but should the folowing formula be exhibited, it will be found that no better agent is wanted. I would be pleased to hear through the AGE, the results of its trial:

℞ Argt. nit., 0.250 gramme
Aque pusa, 30. c. c.

Ft. solut. To be applied 3 times a day.

—*T. L. Dix, M. D., Whitesville, Ky.*

Gall-Stones.—In an interesting paper on gall-stones, Goodhart (British Medical Journal, No. 1622, p. 219) expresses the view that in many cases the formation of such calculi appears to be related to some mental strain or to a neurotic condition. He has seen beneficial results follow the administration of olive oil. For the itching of the skin that attends the jaundice he recommends pilocarpine, by the mouth or hypodermatically.

Antigalactagogue Action of Analgesin.—Guibert has found that the lacteal secretion can be completely suppressed in from two to six days by analgesin in daily dose of 30 grains or more, given in divided portions every two hours. After thus employing analgesin in nineteen cases, it is regarded as harmless and of real service where it is desired to suppress the milk secretion.—*Le Practicien.*

For Coryza.—

℞ Cocaine hydrochlorate, gr. ix.
Menthol, gr. xv.
Coffee, parched and finely pulverized, gr. xxx.
Boric acid, ʒ ij.

M. Take five or six good pinches, as a snuff, a half-dozen times daily.

—*Monde Thérapeutique.*

Hydrastis in Obstetrics.—Dr. Botti has found hydrastis canadensis, in daily dose of from 100 to 200 drops, an excellent hæmo-

static in the uterine hæmorrhage of childbirth, as well as in ante- and post partum bleeding. He regards hydrastis as much superior to the secale preparations, and free from their disagreeable effects.—*Centralblatt für Gynäkologie.*

For Coccydynia.—The following suppository employed at bedtime will afford relief from the pain of coccydynia and permit sleep:

℞ Ext. belladonnæ, gr. ¼.
Ext. hyoscyami, gr. ¾.
Iodiformi, gr. ¾.
Ol. theobromæ, gr. xx.
M.

—Whitla in *Medical News.*

For Chronic Rheumatism.—

℞ Sodii iodidi, ʒ ij.
Sodii bicarbonatis. ʒ iv.
Potassii bicarbonatis, ʒ j.
Liquor. potassii arsenitis, f ʒ jss.
Decoct. sarsaparillæ comp., ad f ʒ xx.
M. Sig.—A tablespoonful in considerable water three times a day after meals.

—*Medical News.*

Intestinal Antisepsis.—Dr. Dujardin-Beaumetz recommends the following formula as a satisfactor intestinal antiseptic:

℞ Salol,
Salicylate of bismuth,
Bicarbonate of sodium, ää 150 grains.

To be divided into thirty powders in capsules. One capsule to be taken before breakfast and before dinner.

Treatment of Chlorosis—Dr. Váczi recommends for chronic chlorosis three Blaud pills daily, and ten drops of the following:

℞ Tinct. strophanthi,
Aq. amygd. amad., ää ʒ ij.

—*Centralb. für Gynäkologie*, No. 50.

Anuria of Scarlatinal Nephritis.—Dr. Starr recommends the following mixture:

℞ Ext. jaborandi fld., 15. grammes.
Potass. citrat., 25. grammes.
Aquæ dest., 75. grammes.
M. Sig —Teaspoonful every four hours.

—*Medical Record.*

For Acute Angina.—

℞ Sodium benzoate, gr. x.
Tincture of benzoin, f ʒ ss.
Infusion of rose leaves, f ʒ j.
M. Use frequently as a gargle.

—*L'Abeille Méd* (*Cour. Méd.*).

Medical Progress.

Inclined Decubitus an Important Aid in the Treatment of Diseases of Women. —Thomas Addis Emmett in a paper on this subject read before the Alumni Association of the Woman's Hospital, Jan. 19th, 1892 (published in New York Journal of Gynæcology and Obstetrics, Feb., 1892) commends the inclined plane as a valuable adjunct in the treatment of diseases of women. We recommend the perusal of his complete paper. In the course of his consideration of this method Dr. Emmett says:

"For ten years or more I have recognized the efficacy of the position and have often temporarily employed it to give a good night's rest without the aid of an anodyne, where the patient has been nervous and could not sleep. I naturally supposed, when successful, that it was due to increasing, by the position, the amount of blood going to the brain, but I am now satisfied that the position temporarily removed the local cause of irritation by diminishing the amount of blood circulating in the pelvis. During the past year or two a large number of the patients in my private hospital have slept habitually in this position. In the past year I have kept others in bed for weeks who were not allowed to assume the upright position under any pretext. To use a bedpan, to have the vaginal injections administered, or to receive local treatment, the patient was for the time turned across the bed. To my surprise I have found but few who have experienced any difficulty after the first or second night, if the degree of elevation was within the limit I have given. I have, however, had no occasion to try the effects of the position where the patient was plethoric, very fleshy, or with any cardiac difficulty, and under these circumstances I would hesitate or be very careful in resorting to it. In several instances the position was continued in use through choice and after all necessity had ceased, as it was found they could not sleep so well with the body in the horizontal plane. I have found the position of marked value in the treatment of enlarged and prolapsed ovaries, in threatening attacks of pelvic peritonitis and in all old cases of pelvic inflammation, where tamponing the vagina so often proves of benefit and where the packing and other treatment is applied to the greatest advantage in the knee-and-chest position. I have cured several cases of tubal disease in this way, and there were no fresh attacks of peritonitis so long as the patient maintained the in-

clined position. But above all the relief has been most prompt in allaying the constant irritation of the bladder attending many cases who suffered from local peritonitis about the utero-sacral ligaments. It is, however, a matter of experiment to ascertain the proper degree of elevation which will afford relief, as I have noticed a difference exists in cases where apparently the condition of pelvic disease was about the same. I have also noticed, in one instance, that a woman with a fibrous tumor flowed much less, and what was apparently becoming a rapid growth was checked by remaining for several weeks in this position. With the use of the inclined plane I am disposed now to keep more patients in bed than formerly, for I find that the treatment can be carried out for weeks with no loss of strength and with decided gain if special attention be given to keeping up the general condition. In this connection I may state that unless there be some contra-indication, as from the existence of acute inflammation, massage in some form, for the limbs at least, will be found most useful.

I believe that the continued use of the inclined plane will prove of great value in connection with the course of treatment outlined by Dr. Weir Mitchell for the class of cases needing the "rest cure." In these cases, as a rule, only a functional disturbance of the genital organs exists, with a tendency to more or less congestion, due rather to impaired nutrition from some fault or injury lying in the nerve centres than from any actual disease.

To keep the foot of the bed elevated I use a wooden support for each leg in the shape of a four-sided pyramid, the base of which should be about as broad as the height, and with the apex sawed off to receive a cap of thick wood about four inches square. In the centre of this a receptacle should be made deep enough to hold the castor from slipping out.

TREATMENT OF DANGEROUS HÆMORRHAGES.—There is no contingency which more forcibly reminds the physician of the limitation of his power than those hæmorrhages which he cannot control by surgical means.

In hæmoptysis, for instance, the multiplicity of remedies bears testimony to their inadequacy. We have ergot and acet. lead, for instance, whose action may be explained theoretically, but is lamentably defective practically.

After all, rest and quiet—mental and physical—are the chief remedies.

Post-partum hæmorrhage is the most awe-inspiring of all bleedings, when we are unable to arouse uterine contractions. How helpless the physician stands at the side of the gasping, blanched woman comes home home to most of us at some period in our professional lives. Hence any method by which we may be able in the one case to harbor the blood supply and in the other to replace it so that the flagging heart may have something to contract upon, should be welcomed.

Dr. Dawbarn, whose contributions to medicine usually bear the impress of practical utility, tells us in a paper read before the surgical section of the New York Academy of Medicine, that he has found a valuable resource in internal hæmorrhage, the sequestration of blood in one or more extremities, until time has been given for the formation of a firm clot—say for an hour or so—and thus allowing the blood to re-enter the circulation slowly. He thereby diminishes the blood pressure and conduces to clotting, especially if faintness is induced. Whenever there is bleeding, he says, acute enough to threaten life, and not within reach of direct pressure or of the artery clamp, our main reliance should be the tourniquet or the twisting of a handkerchief near the junction of the limb and the body, until the arterial pulse is just barely felt on the distal side. In pulmonary œdema suddenly developed by cardiac exhaustion from any cause, he regards this procedure as the speediest means of relief to the tired heart, tiding over a critical period until by free stimulation the organ can be made to resume efficient work.

Dr. Dawbarn next discussed a novel method of infusion whose simplicity commends itself at once to our practical adoption. The day of transfusion of blood, he justly remarks, is past, because as good if not better results may be obtained from infusion of a simple salt solution, 6 to 1,000 of boiled water. This would be, roughly, a heaped teaspoonful to a quart of boiled water, as hot as the hand can bear. That this solution must be rendered strictly aseptic by boiling—and, be it remembered, not rendered septic again by dipping the uncleaned hand into it for testing the temperature—goes without saying. An ordinary hypodermatic needle is pushed into the femoral artery until bright red blood issues from it. It is connected with the upper end of a clean rubber catheter or drainage tubing, and the lower with the nozzle of a Davidson syringe. Care having been taken that no air remains in the rubber tube, the fluid is slowly injected. It requires considerable force to overcome the intra-vascular

pressure, even in a flagging circulation; there is so much resistance that it seems as if a clot must be plugging the needle, but by half an hour of steady work a pint or more may then be injected. In the absence of the Davidson syringe, a fountain syringe of the height of six feet may answer the purpose.

This simple procedure not only acted well in Dr. Dawbarn's experiments on animals, but also in a case of post-partum hæmorrhage that seemed hopeless.

After the circulation was somewhat restored, Dr. Dawbarn used in this case the intra-cellular injection of the six-tenths per-cent. salt solution, injecting a few ounces at different points.

The readiness with which the necessary elements of the treatment may be obtained, renders it a valuable addition to our therapeutic resources.—*Dietetic Gazette.*

Cure for Drunkenness.—Dr. W. R. Amick gives an interesting article on this subject in the Cincinnati Lancet for February 6th. In speaking of the many cures for that class of cases known as chronic alcoholics, he says he believes that medicine affords a confirmed inebriate as sure relief as from any other pathological condition. He is very positive that reformation by the aid of medicine has a solid foundation in the changes of structure on which the appetite depends. He gives a very simple prescription, which he says is very efficient in allaying the craving for drink:

℞ Tr. capsici, ♏x.
Tr. nuc. vom., ♏x.
Ac. nit. dil., ♏xx.
Aquæ, ℥ ii.
M. Sig.—Take this three times daily.

A very noted specific for drunkenness which, it is stated, has cured more than 2,800 cases without a single relapse, was a secret for many years, but it is established beyond the question of a doubt that this remedy was nothing more than a preparation of red Peruvian bark. A pound of the bark is coarsely powdered and macerated in a pint of alcohol until the virtues of the bark are extracted. It is then evaporated to one-half a pint. A teaspoonful of this is given every three hours for two or three days; after that the dose is reduced to one-half teaspoonful, and gradually diminished until only five drops at a dose are taken. A cure is generally effected in from one to two weeks. The remedy is easily tried, is harmless, and is a good tonic. Nitrate of strychnia has a powerful influence in controlling the desire and craving for liquor when given hypodermatically. It allays the craving for drink, and has a direct effect upon the brain and nervous system. The hypodermatical method also makes a powerful impression upon the nervous system. Strychnine may be combined with chloride of gold or sodium, or both. The chlorides have a marked influence in counteracting the effects of alcohol. This is shown by the short space of time that is required to sober drunken men with ammonia.—*National Medical Review*, March, 1892.

The Ordinary Water-Bed as a Means of Affecting the Temperature of the Body.—I have for some years used the water-bed as a means of heating the human body during collapse, with such extraordinarily good results that I venture to call the attention of the profession to it, without claiming that no one else has done the same thing.

In cases of collapse and subnormal temperature occurring during advanced stage of typhoid fever, the severe forms of bronchitis, etc., etc., I have been accustomed to employ an india-rubber water-bed, about half the width of the ordinary mattress. It is placed upon the bed, alongside of the patient, partially filled with water at a temperature of 140° to 150° F., and covered with blankets, upon which the patient is laid. The weight of the body carries it down and forces the water up at the sides, so that the person is partially surrounded by the heated water. The mass of the water, and the protection of the blankets, prevents the loss of heat, so that the mattress keeps hot for many hours Within a few days I have had an example of the power of the hot water mattress. The patient, in the early part of the fourth week of a typhoid, went into a collapse, with subnormal temperature and profuse sweating. At the time when the water-bed was put on his mattress his temperature was 97° F. There was some delay in getting the hot water; probably three-quarters of an hour elapsed before the man was put on the bed, and his temperature had fallen to 95.2° F. Within twenty minutes the temperature had gone up to 97.5° F., and not long afterward was normal. When the heat of the body has reached 98.5 F., the patient may be lifted off and laid alongside of the water-bed, which, being covered by the same blankets as are over him, will keep the temperature up to the normal.

The success which I have had in heating the body with this contrivance suggests that the water-bed may also be used instead of the cold bath for reducing temperature. All

that would be necessary would be to have the water-bed supplied with two nozzles, instead of the ordinary aperture, and an india-rubber tubing or hose fastened to each nozzle, connecting the one with the spigot, the other with the outlet of the neighboring bath-tub or stationary washstand. In this way, without labor or trouble, water of a constant temperature of 40° to 50° F., at least in winter, could be kept in the bed, and it would be very easy to run the water through ice if it were necessary to get further lowering of the temperature. I have not tried this method of cooling the body; but my present hospital practice not affording me much opportunity to study typhoid or other fevers, I venture to call the attention of the profession to the matter.—H. C. Wood, M.D., in *University Medical Magazine*, March, 1892.

Salicylated Collodion for the Itch.—The use of salicylated collodion for separating the dead from the healthy skin when applied to corns suggested to me that it would be of use in scabies (itch).

I recommended its use to a medical friend, who soon had occasion to use it under my observation.

The case in which it was first used had been treated by the usual baths and applications of sulphur, but had been but slightly improved; the patient objected to being besmeared with grease and sulphur, so salicylated collodion of the following formula was prescribed:

℞ Acidi salicylici, ʒ i.
Tinct cannab. ind., ʒ i.
Collod. flex. q. s. ad ℥ i.
Mix.

After a hot alkaline bath, to remove all grease from the skin, the collodion was applied to each spot where the disease showed itself. During the drying of the collodion a stinging pain was experienced, but after that ceased the patient was very comfortable and the spots itched no more.

Each night the patient was examined for new spots, which were painted with the collodion, as were old spots on which covering was broken.

The treatment was continued for ten days, after which the collodion was permitted to wear off during the patient's usual baths.

The recovery was complete, and caused the same treatment to be used in six other cases with even more satisfactory results, as nothing was done but have the patients take hot baths and regularly apply salicylated collodion as above described. All were entirely free from the disease in from five to ten days.

The advantages of this treatment are simplicity, cleanliness, and relief afforded the patient after the first application.

The only precaution to be taken is to cover each spot, and keep it well covered for about ten days.—A. Sidney Rauschenberg, Ph. G., in *Pharmaceutical Record*.

Treatment of Alcoholism.—I would like to give the results I have obtained by the use of strychnine nitrate in chronic alcoholism.

I have treated nine cases, a majority of them old topers, and two of them regular brandy-drinkers for years. Internally I gave:

℞ Tinct. nux vom., 5 drachms.
Dil, mur. acid, 3 drachms.
Pepsin scale (P., D. & Co.), 2 drachms.
Glycerin, 2 ounces.
Infus gentian co., q. s. ad 8 ounces

M. Sig.—Two teaspoonsful in from one half to a glass of water three times daily just before each meal; the dose of the nux or pepsin can be increased if necessary.

Bromide of soda and bromide of ammonia, with cannabis indica or hyoscyamus, tincture or fluid extract, separate or in combination, may be given to procure sleep.

I gave daily, and in some cases twice daily, a hypodermatic injection of one-fortieth grain of strychnine nitrate, varying the dose a little to adapt it to each case. In a few days I was astonished to find that they had no desire for drink of any kind; and in from ten to twenty injections daily, or twenty to forty if given twice daily, they had acquired so thorough a distaste for alcohol that I discontinued the use of the daily injections, and gave them every other, and every third and fourth day, and inside of two months discontinued treatment altogether, with the exception of the two brandy-drinkers, and with them I kept up the internal treatment for about four months. The result of this treatment was not only very gratifying to me, but very surprising, and I believe that strychnine nitrate is a specific for dipsomania.—Chas. W. Scott, M.D., in *Medical World*, March, 1892.

New Observations in the Treatment of Alopecia Areata by Means of Iodine and Collodium.—The material consisted of 34 cases, 7 females and 27 males. Nine were children from 5 to 13 years of age, the ages of the adults varying from 16 to 48. In 24

the scalp was the seat of the disease, in 5 the beard, in 4 the scalp and beard, and one case was universal. The disease had lasted in some only from one to eighteen months, in others for several years, in one for six years. In one, however, it had been present only three days. In studying the effects of the treatment the writer excludes fifteen cases, for the reason that they were seen only once or twice. He also leaves out eight which were still under treatment, and thus deals with only eleven cases, which were all treated and cured by his method, and which remained well. The same procedure was followed in every case. The affected areas were painted with a solution of iodine in collodium (1 in 30), the application going beyond the borders of the patches. As soon as it began to be detached, in three, four, or more days, the coating was removed, the surface washed with a solution of bi-chloride of mercury, and the collodium was re-applied. Irritation resulted from the medication, usually limited to a sensation of burning or itching, lasting for a few minutes or hours; in some instances a dermatitis was observed, and in these treatment was suspended for a few days. In a few cases the cure was hastened by electricity. Chatelain believes that alopecia areata is parasitic in origin, and the action of the treatment is due to the fact that the collodium excludes the air and consequently oxygen; that the solution is exciting and also acts as a parasiticide. He concludes that from the treatment uniform results are obtained—a cure of the disease; the result is not only constant, but rapid, on an average the treatment lasting about six weeks. Moreover, he regards it as a prophylactic against the spread of the disease, and finally as a very easy and practical therapeutic measure.—*Jour. des Mal. Cutan. et Syph.*

Treatment of Buboes.—McBurney divides his cases under three classes: Those in which the glands are tender and hard without any sign of septic infection; those in which there are signs of gland deterioration, tenderness, redness, and softening; those in which the glands are completely broken down. Cases of the first class are treated by the application of cold. Those of the second are suitable for excision, all the glands being removed and those portions of the skin which are badly involved in the inflammatory process. This treatment succeeds in proportion to the freedom of the glands from softening. It is in the third class of cases, in many of which excision is hopeless, that he has been led to adopt injections of iodoform and vaselin, as advised by Fontain. He has treated twenty cases. The method pursued was to make a small opening, through which the fluid is expressed. A small spoon is then introduced and dividing septa and connecting tissue bands broken down. The sac is then overdistended six to twelve times with a bi-chloride solution, 1 to 1,000. Then, by means of a syringe, a mixture of iodoform and vaselin (a drachm to the ounce), which has been heated to fluidity, is injected. The application of a cold gauze compress causes the vaseline to harden in a few minutes. In two cases treated by him complete failure has resulted, in eight a partial success was secured, and in the remaining ten the success was complete after the first or second injection. Five had recovered before the fourteenth day, and the average duration of all was nineteen days.

Convulsions Treated by Compression of the Carotid.—Dr. Leonard Roheim, of Buda-Pesth, publishes in the Gyógyássat a case of eclampsia which he had, after the failure of all ordinary remedies, successfully treated by compression of the carotid. The case, which is quoted by the Pester Medicinisch-Chirurgische Presse, was that of a robust man of fifty-six, who had been suffering for years from cancer of the bladder, with occasional hæmaturia. The man had been attacked by a most violent eclamptic paroxysm, which was mainly confined to the left side. Dr. Roheim prescribed in vain musk, valerianate of zinc, bromide of potassium, assafœtida, hypodermatic injections of morphia, enemata of hydrate of chloral, and frictions with mustard, and at last employed compression of the carotid. After constant compression for some time of the right carotid, the convulsions were suddenly arrested, the patient recovered normal respiration, and very soon felt quite well. Two or three slighter attacks followed, which were soon arrested by properly instructed attendants. The effect of the compression was so remarkable that Dr. Roheim earnestly recommends this treatment. He compressed the carotid with the index and second finger between the larynx and sterno-cleido-mastoid muscle backwards towards the spine, just as Trousseau and Bland had recommended. He was equally successful in the case of a girl nine years old. He considers the rationale of the treatment to be that, by compressing the carotid and at the same time necessarily the sympathetic nerve fibres, which closely follow the course of the artery, the excitability of the brain is allayed.

On Taking Fluid with Meals.—A great deal of misapprehension is often found to exist in the popular mind in regard to matters of eating and drinking. One of these misapprehensions to which we may refer is as to the injuriousness of taking fluid with meals. Upon this matter Mr. Hutchinson remarks in the last number of his Archives: "I observed with pleasure that the verdict of general experience and common sense has been confirmed by scientific experiment in the matter of taking fluid with meals. Dr. Tev. O. Stratievsky, of St. Petersburg, after elaborate trials, has found that fluids materially assist the assimilation of proteids, and announces the following conclusion, which is to be hoped no future experiments will controvert: 'On the whole the widely-spread custom of taking fluids during or just before one's meals proves to be rational and fully justified on strict scientific grounds. To take fluids with the meals is almost as important an adjunct to digestion as is the mastication of solid food preparatory to swallowing it.'"

It is obvious, however, that there is a limit to the amount of fluid one can swallow with impunity—with meals as at other times. It would be dangerous to create a general impression that fluid is good with food irrespective of quantity. It is, moreover, a well-ascertained clinical fact that an excess of cumprandial fluid does retard digestion in certain people and gives rise to discomfort in most. A little attention to one's sensations in such matters will far better fix the desirable limit than all the "data" in the world.—*Medical Press and Circular.*

A Happy Application of Insufflation.—Renault (Le Progrès Médical, 1891, No. 51, p. 475) records an instructive case occurring under his notice at the Maternité. A child about a month old had had a cough for three days, and at the end of that time was brought to the notice of the author. Well-marked broncho-pneumonia was found, with a temperature of 101.3° F. Dyspnœa continued to increase until the following day, when the nurse in the ward was called to find the child in a state of almost complete asphyxia. The skin was cold, the face cyanosed, the lips blue, and the respiratory movements very shallow and failing. Without hopes of reviving it, but rather that the mother, who was present, should not think the child was permitted to die without an effort at relief, the nurse took up the insufflateur, which was in daily use in the wards for resuscitating asphyxiated newborn infants, and applied it to the mouth of the dying child. After an occasional interruption in the operation during a period of five minutes, the bluish color of the face and lips began to give way to a rosy tint. This unhoped-for success gave renewed encouragement to her efforts, and after a quarter-hour's work the child had so far been resuscitated as to permit of more active treatment with a mustard bath, dry cups, and diffusible stimulants. Another attack of asphyxia was treated successfully in the same way, after which the case went on to an uninterrupted recovery.

Coca as a Prophylactic Against Influenza.—Dr. Sajous writes in the Satellite: The nature of influenza, the marked debility induced by it, and its sequelæ, all point to a remarkable depression of the general system. During its presence in the country, the prevalence and severity of other acute diseases were largely increased and the mortality from all other causes augmented. This condition of affairs continued for some time after the subsidence of the epidemic.

The value of coca as a tonic to antagonize any tendency to adynamia is too well known to require elaboration here. Its therapeutical effects tend to build up precisely what influenza tends to destroy—a fact instanced by the use made of coca leaves by the natives of Bolivia and Peru, which renders them capable of undergoing the greatest possible physical strain, and that frequently with sparse nourishment. This remarkable tonic action of coca in medical therapeutics has further been tested by Brown-Sequard, Dujardin-Beaumetz, Bell, Bouchut, A. McLane Hamilton, A. E. McDonald, H. M. Lyman, I. N. Danforth, P. S. Conner, and many other eminent physicians, too numerous to mention in the space at our disposal.

Ethylate of Sodium in Cutaneous Disease.—This compound, which is obtained by heating sodium to a temperature of 50° in the presence of alcohol, has afforded the author, director of the Dermatological Clinic of Bologna, very good results in the treatment of lupus, of psoriasis, of venereal ulcers, etc. He employs it in the form of ointment (olive oil 100 parts, ethylate of sodium 2 parts), or applies with a brush, using an aqueous solution of ten per cent. He obtained complete cure in every case. This compound acted both as caustic and cicatrisant, and would accordingly be indicated in all forms of slow cutaneous ulceration.—M. Gamberieu in *Riforma Medica.*

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Original Articles.

TWO CASES OF BRAIN-TUMOR.

BY E. P. HURD, M. D.

Two cases of tumor of the right hemisphere of the cerebrum have lately come under my observation. In both the morbid growths were confined to the right parietal lobes, and there were no distinct localizing symptoms in the form of partial paralyses or spasms, no auditory or vesical disturbances, which pointed to a particular region of the cerebrum as the seat of lesion. In both headache was a persistent symptom, and both had occasional attacks of loss of consciousness of an epileptiform or apoplectiform character. The first patient was my own—the second was under the care of Dr. F. A. Howe.

Case 1.—Mrs. T. S. L., wife of a Newbury farmer, had good health up to the age of 42 years, though an occasional sufferer from headaches. On the afternoon of Jan. 29, 1890, she was visiting a school near her home when she was taken with a severe epileptiform fit, in which she remained an hour unconscious. The fit was ushered in by a loud outcry when she fell to the floor, and the usual phases of tonic followed by clonic convulsions ensued. According to the statement of bystanders, *the muscles of the left side were principally convulsed.* I arrived at the house of the patient an hour after she had been brought home; she was conscious, but dazed. She regained her usual health, but thereafter became the victim of frequent headaches, not confined to any one spot, but generally frontal; these headaches were very obstinate, coming on at any hour of the day or night. Antipyrin, phenacetin, acetanilid, caffein, were all tried. More relief was obtained from antipyrin in fifteen-grain doses than from anything else. The headache was not preceded or followed by vomiting, and at no time was vomiting a prominent symptom.

Two months after the first convulsion, Mrs. L. had another of a similar character, and thereafter, at rather long intervals, she continued to have such attacks to the end of her life. The loss of consciousness was often but momentary, being unattended with struggling. Two months before her death she fell, striking her forehead heavily against a stool, and bore the marks of the bruise to her death.

I was frequently in attendance on Mrs. L. during the summer and fall of 1890, being summoned on account of the headaches. There were no other nervous disturbances, except an obstinate pruritus about the neck for which I could find no cause. Mentally, her condition was good.

I was not able to make any satisfactory diagnosis of the case. Menstruation was frequently interrupted — the headaches seemed to be aggravated by such interruptions. It was suggested that change of life might be in progress; this supposition was, however, not seriously entertained. The urine was frequently analyzed and found normal, so that the headaches could not be set down to the account of uræmia. I was eventually led to make a positive diagnosis of brain-tumor, without any definite opinion as to the localization.

Mrs. L. improved in the fall of 1890, and was for several months comparatively free from headaches and able to attend to her housework. Then in the spring of 1891 her condition became worse, and she was seldom free from headaches except during the night, when her sleep was remarkably profound. Bed-ridden for a time, she slowly convalesced, but for a long time had difficulty in walking, owing to paresis of the lower members. The headaches still continued. Careful examination failed to discover any anæsthesia, nor did she complain of numbness. In September and October she was so far

recovered that she could ride out and attend to housework; when the headaches came on they were always controlled by antipyrin in doses of 15 grains. During this time an ophthalmoscopic examination failed to reveal optic neuritis. She had several convulsive attacks in November and December; in January the headaches became more and more severe; a marked hebetude set in, and during the intervals when she was free from headache sleep was easily induced; the night sleep was especially profound. It at length became difficult for the patient to leave her bed; any exertion, even raising the head from the pillow, was attended by headache and sometimes dizziness. At no time was there vomiting or other digestive disturbance. Mrs. L. died quite suddenly on the night of the 23d, without any warning of near dissolution.

I was unable to be present at the autopsy, which was performed by Drs. Cheever and Tigh, of Newburyport, with the following results—I copy from Dr. Cheever's notes. (Only the brain was examined.)

Autopsy 72 hours after death. Only the encephalon examined. On removal of calvarium intense injection of vessels of pia was noticed. A small clot was found at base, pressing on medulla oblongata, perhaps the cause of the sudden death. Dura and other membranes found to be normal except over the right parietal lobe; here the entire meninges were thickened and adherent to the underlying brain substance (pachymeningitis). In this area (the right parietal lobe), near its anterior superior angle, just back of the Rolandic fissure, was discovered a mass of small nodular round tumors, ten or twelve in number, from size of a pea to that of a small marble; some of these were firm, others of softish consistency.

In this region occupied by this mass of tumors the convolutions were broken down, and the brain substance completely disorganized and softened; there were no hæmorrhagic foci.

Microscopic examination of hardened sections of one of the tumors showed the morbid growths to belong to the *small round-celled sarcoma*, the basis being a reticulated tissue with large meshes full of small round cells.

Case 2.—This case occurred in the practice of Dr. F. A. Howe. I am able to present but brief notes. I was present at the autopsy with Drs. Howe, Snow, and Young. Only the encephalon was examined. The principal object of interest was that nearly the whole of the inferior parietal lobule (the angular gyrus being exempt) was occupied by an encephaloid growth the size of a small orange. Over this tumor, which made no protrusion, the membranes were somewhat inflamed, though not thickened; in fact, the external appearance did not suggest any lesion till diligent search was made. The surrounding gray substance and the underlying *centrum ovale* were much softened.

The tumor was bounded in front by the fissure of Rolando, from which its anterior margin was separated by about an inch of healthy convolution; behind, by the angular gyrus, on which it did not perceptibly encroach; above, by the healthy tissue of the superior parietal lobule; below, by the first and second temporal convolutions.

The history of this case, as given me by Dr. Howe, is as follows: Mrs. E. W., of Newport, first consulted Dr. H., Oct. 1, 1891, on account of the severe headaches from which she was suffering. These headaches had been troubling her at intervals for a year. They were seldom followed by vomiting. Following the severe headache in October she had what was called an "ill turn," with loss of consciousness, lasting only a few minutes. During this fit she was very rigid, without clonic convulsions. Numbness of both hands and arms followed, and lasted for several weeks. The pain in the head was worst about an inch behind the right ear and on a line with the tip. From October till the middle of December she was hardly free from headache and numbness, though able to be around the house and do a little work. She went to Boston one day, got very tired and exhausted, and on reaching home was seized with a much more violent attack of pain in the head. She became unconscious, was a good deal convulsed, and did not regain consciousness for nearly an hour. From this time she was partially paralyzed on both sides. She could not rise from bed without help; both hands were clumsy, and eventually, weeks before death, became useless. Her lower extremities were paralyzed.

Dr. Howe formulated the diagnosis:

Tumor of the cerebrum; site not determined. There was excessive tenderness over scalp, especially marked over the seat of greatest pain, with some œdema. There was frequently intense pain in right orbit. There was marked hebetude all through the sickness, but otherwise the intellectual faculties were not impaired.

This patient had complained of scotomata, visual hallucinations, and was, according to the statement of her family, near the close, blind of the left eye. She died Feb. 1, 1892, of exhaustion.

In connection with this very brief and imperfect report I shall offer no comments, except a brief extract from a private letter, written to me by Dr. Philip Coombs Knapp, of Harvard Medical School. Dr. Knapp, as is known, has written a work on "Intra-Cranial Growths," which is now a standard authority on tumors of the brain. He says:

"As to the right parietal lobe, it is in part, I think, a latent region. Growths in the upper part may affect the leg centre somewhat, and deeper growths near the angular gyrus may affect the optic tract. Sensory disturbances are also rather common, but they may be slight. Although growths in the right parietal lobe may give rise to fairly distinct localizing symptoms, such as paralysis, anæsthesia, convulsions, and hemianopsia, still they may often be misleading, as in a case that Putnam operated on, some years ago—Mr. Coombs, of Newburyport—and these are often only general symptoms. The localizing symptoms are less often marked than with growths in the Rolandic region. In addition, there is still the unexplained fact that a tumor may occur almost anywhere in the brain without distinct symptoms."

FUNGATING CHANCROID AND PHIMOSIS—REFLEX GENITAL IRRITATION AND SPONDYLITIS IN THE SAME PATIENT.*

BY G. FRANK LYDSTON, M.D.

Fungating Chancroid and Phimosis.—I present to you this morning a very interesting case, illustrating several of the varying phases of the phenomena of the local venereal diseases. This young man some six weeks ago contracted a gonorrhœa, presenting the ordinary characteristics of that disease; the patient having a long prepuce, which was with difficulty retracted and kept clean. The patient, within a week or so after the appearance of the urethritis, developed balano-posthitis, which resulted in lymphangitis and great œdema, with complete phimosis. About three weeks after the gonorrhœa appeared, the patient noticed that several little fissures at the preputial orifice, which had been produced by his attempts at retraction of the inflamed tissue, were beginning to ulcerate. This ulceration extended, the patient meanwhile being under my observation, and formed what were apparently typical chancroids. He had not in the meantime had intercourse; the very idea of copulation, he says, was painful to him. The sores were cauterized, but, as is characteristic of chancroids under such circumstances, they did not heal. Instead of healing, their bases became thickened and hyperplastic, the hyperplasia increasing until we have this morning ulcers upon a precipitous base abruptly raised from the surface of the skin. There is none of the peculiar eroded appearance of chancroid, the surface of the ulcers being covered with fungous granulations bathed in ichorous pus. You will observe here upon the thigh what is apparently a typical chancroid. This is the result of auto-inoculation, which was performed three days ago with pus taken, not from the ulcers, but from beneath the prepuce. The hyperplastic tissue underlying the ulcers is not particularly hard, although distinctly circumscribed. The glands of the groin are a trifle enlarged and sensitive to pressure, but do not present the characteristic hardness of syphilitic adenitis. From the history of the case and present appearances, one would naturally make a diagnosis of gonorrhœa, followed by subsequent exposure and infection with chancroid. One would naturally suppose, from the appearance of the ulcerations, which are certainly not typically chancroidal, and from the fact that auto-inoculation was perfectly successful in producing what is apparently typical chancroid, that there are in this case at the present

* Clinical lecture delivered in the College of Physicians and Surgeons, Chicago.

time concealed chancroids beneath the prepuce. This may possibly be the case, yet I doubt it. Even if present, they would not prove to my mind the hetero-genetic infection with the virus of chancroid.

In a previous lecture upon the evolution of the local venereal diseases, I endeavored to impress upon your minds the view that the local venereal diseases develop spontaneously as a consequence of bacterial evolution with resulting chemical products in certain pathological and physiological fluids of the female genital organs under the influence of heat, moisture, filth, and local irritation—with, perhaps, behind it all, individual predisposition. I believe that these evolutionary processes in the vagina of the woman may produce chancroids about the ostium vaginæ and vulva. I believe, moreover, that the same conditions existing beneath a phimosed prepuce in the male may give rise to similar results. It would not surprise me at all to find, on slitting this prepuce, that there are no chancroids, but simply a gonorrhœa and a severe balanitis, which have given rise, through evolution of their products, to some toxic agent capable of infecting minute cracks and abrasions about the stenosed orifice of the prepuce. Such inoculation might result in the development of the so-called specific ulcer of chancroid. I say this, notwithstanding the fact that auto-inoculation in this case has been signally successful.

I wish to call your attention to the peculiar hyperplastic condition of the tissues underlying these ulcers. This peculiar condition of tissue hyperplasia follows what has been termed indurating œdema, a condition supposed to be an appanage of syphilis alone, and, if allowed to go on, would not only increase in extent, but would become very hard, perhaps almost cartilaginous in consistency. It might involve the entire prepuce. Cases involving the entire integument of the penis and scrotum have been known. This condition of indurating œdema, however, is most frequently seen in the female syphilitics, and by some authorities it is considered to be peculiarly a female attribute. It may, however, occur in the male. I will have some sections made in the laboratory, and I premise that upon investigation with the microscope the stroma of hyperplastic tissue underlying these ulcers will be found to be simply young connective tissue.

I will split the prepuce in this case upon the dorsum of the penis, thus exposing the glans. We will then ascertain whether there are any sores beneath the prepuce, which by infection might possibly be responsible for the condition present in this case. I will use in lieu of a general anæsthetic a four-per-cent. aqueous solution of cocaine injected with a hypodermatic syringe. I will inject about ten drops of this at the root of the penis, thus getting the fluid as near as possible to the dorsal nerve, and the rest of it in ten-drop doses above, below, and upon each side of the foreskin. At the end of five minutes anæsthesia will be sufficiently complete for our purpose.

As I lay back the foreskin you will observe, gentlemen, that we can find nothing excepting a subacute balanitis. There are no chancroids, chancres, or even simple ulcers beneath the prepuce, and it is evident that, if chancroids have been present at all, they certainly were not of recent date. Auto-inoculation in this case shows clearly to my mind the possibility of auto-inoculable chancroidal virus being derived from something not chancroidal *per se*. I invariably wash the parts preliminary to operation with pure peroxide of hydrogen and a 1:2000 solution of bichloride of mercury, thus reducing the danger of the cut surfaces to a minimum. Inasmuch as there is a possibility of infection, I will not form a complete circumcision; I will preserve that for a future occasion. I expect union of the cut prepuce by first intention. I will dress the part with iodoform after taking several stitches in the cut surfaces of the prepuce, with the expectation that the wound will heal by first intention. If it should not do so, the resulting ulceration will certainly be easily managed. The parts will be in very much better condition than before the operation. I believe that in a large proportion of cases of concealed chancroid the dorsal incision is warrantable after proper antiseptic irrigation of the part, for, even if the cut surfaces become infected, the danger to the integrity of the organ is not as great as where the destruction is allowed to go on uninterruptedly beneath the phimosed prepuce.

Reflex Genital Irritation and Spondylitis in the Same Patient.—The next case is one of exceptional interest, both from the standpoint of diagnosis and treatment. This little boy, four years of age, was in apparently good health until about three months ago, when the parents noticed that he had held his water for a prolonged period; that when he did micturate, he made considerable outcry as though the act were exceedingly painful. This has gone on until within the last two weeks. About a month or six weeks ago the parents noted a peculiar gait, and also observed that when he attempted to pick up objects from the floor he was compelled to get down upon his knees, holding his back perfectly rigid. His appetite has been good; his bowels regular; slept well at night, and has run and played with the rest of the children in a very lively manner. When the patient was first brought to my office, I examined very carefully for possible evidences of spondylitis or Pott's disease of the spine. I made all of the usual tests and could elicit no tenderness at any portion of the spinal column. On examining—as should always be done in such cases—the genital apparatus, I found a phimosed, inflamed, and adherent prepuce. I suggested to the parents the possibility of all the symptoms being due to this condition. This condition of reflex disturbance of the motor apparatus, as a consequence of genital irritation in children, is very frequently met with. I, at the same time, qualified my diagnosis by stating that it was barely possible that there was incipient disease of the spine that had not yet manifested itself sufficiently to be detected by the means at our command. An operation was consented to and performed one week ago. You will notice that the part has healed by first intention, and that there is a very good result. I find now that the little patient can stoop and pick up objects from the floor quite as readily as any child. The unsteadiness and wobbling in his gait have perceptibly improved. He no longer cries on micturating, and it would appear from *a priori* considerations that the entire source of the trouble has been eliminated. I am still, however, a little suspicious of the condition of the spine, and shall watch the case very carefully.

It is evident, if there is disease of the spine in this case, that there has been a complexity of symptoms due in part at least to the genital irritation. It would be impossible to make a diagnosis early in such a case without subtracting the effects of the genital irritation *per se* from those which might be produced by spondylitis.

As the improvement did not continue, but the case remained at a standstill, I watched it carefully, and finally was able to detect slight tenderness over the third and fourth lumbar vertebræ. I made a diagnosis of incipient Pott's disease, and suggested a plaster cast. There is now a slight knuckle corresponding to those two vertebræ, and there is no longer any doubt as to the character of the case. I am sorry to state however, that the parents have foolishly declined to have a plaster cast or any other mechanical appliance used, and have avowed their intention of resorting to the faith cure, the result of which will be either permanent deformity or death in the case of the child and the probable cure of the faith entertained by the parents. This brings up a little story of a man, who, in a discussion regarding the faith cure, was advised to try it. He replied: "I have already done so." "And were you cured?" asked his adviser. "Yes," he replied, "I was very quickly cured of my faith."

I trust that you will remember this case as an illustration of certain perplexities of diagnosis that sometimes arise. It will very rarely happen, it is true, that reflex genital irritation and spondylitis will be associated in the same patient; still we have here a positive case of the kind, and one which is well worthy of careful study and attention.

LANDMARKS IN GYNÆCOLOGY.

BY FRED BYRON ROBINSON, B. S., M. D.*

[*Continued.*]

MENSTRUATION.

In a previous article (MEDICAL AGE, March 25), we spoke of six convenient landmarks in gynæcology, and in that article dis-

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cussed the anatomy of the abdomen and pelvis as the first landmark in female disease. In this article we will talk of the second landmark in gynæcology, which we will call *menstruation*.

Menstruation is a little unpleasant matter which belongs almost exclusively to women. It is no doubt a remnant of some ancient ancestral process. If we could pick up the continuous chain of animal development, we would no doubt find in some ancient order a clear exposition of menstruation. It would probably then be much easier to comprehend the modified menstruation of woman standing on her hind-feet. There is something akin to menstruation seen through animal life, especially mammalian life, and this similar process is known as *œstrus* or *rut*. When animals have the œstrus or rut, they are in "heat," or, in other words, favorably inclined to receive the male in copulation. But most wonderful modifications arise by environments. The plan and economy of animal development play a rôle. Traditional habits of animals change matters. Climate and domestication assert laws. Confinement changes the physiology of life, and the preponderating of the nervous system over the merely physical tells many complex stories. It may be that a cow in rut, a sitting hen, and a woman menstruating do not at first sight present a very similar process. Yet a closer study will not fail to reveal a close similarity in the three phenomena. Darwin's simple story of animal developmental progress unfolds itself to us like the breaking of the morning light. In the keen struggle for existence, Darwin's story tells us vividly of the vast changes produced by *heredity* and *variation*. But in all the array of facts that the naturalist can marshal before our view we must not forget that the sexual instincts are the most intense. The sexual instinct of any animal race is the most dominant, and rises above any other instinct. The paternal sexual instinct and the maternal sexual instinct may manifest themselves very differently, but they are very dominant in both individuals. The all-pervading powerful sexual instinct among animals allows the fittest to survive. The most perfect and strongest males, fortunately, father the future animals. The active struggle of parents to make a suitable marriage for their daughter (or son) is only a different manifestation of the survival of the fittest and unblemished.

In dealing with any physiological process that touches the heart of the most dominant of all instincts—the sexual instincts—every avenue that leads to it should be investigated. It must be understood that the menstrual life of woman is her sexual life, and her thirty years of seed-time and harvest alone make her woman. Before her seed-time and harvest she is but a boy, and after she is nothing but a man. When in the years of her sexual instincts, she is entirely built around her uterus, and dominated by that capering, capricious organ; when the uterine dynasty has ceased its reign of hopeful heritage, she lives an indifferent present life of simple existence. A woman lives two lives; one is the life of the individual, or of mankind; the other is the life of her own species, or the life which is involved in the female sexual organs. In our consideration of woman the sexual life must not be considered the fifth wheel of the buggy, for it is the chief wheel of her thirty years of seed-time and harvest.

We spoke of environments producing change in structure, and even function, in the developmental progress of mammalian life. But sexual instincts remain paramount. The environments do not change the instincts of sex. Yet the environments may modify the plan of activity. The season and climate act as chief factors in changing and modifying the time of sexual activity of animals. If the young of animals are not born at proper seasons, they may die from want of proper food. Whatever climate an animal lives in, its sexual activity is modified to suit the seasons. This adaptation of sexual activity to climatic necessities is well seen in deer, sheep, and birds. Animals produce their young in such quantity and at such seasons as will enable them to subsist, and not perish. Of course, sexual life is not such a distinct affair until we reach birds, where two facts come in. One fact here is the care of the parent over the young (hatching and feeding). The second fact is that of a warm-blooded circulation. From birds on, we will note that the animal's sexual instincts must

and do yield, both in tradition and habit of life, to the necessity of the climate.

He who does not believe that the sexual instincts are quite dominating should attempt to persuade a sitting hen not to sit, when the hen "feels that way." The hen has got the rut or œstrus, and will "sit" in spite of eggs or no eggs. With the hen it is a distinct period. Her ganglia (uterine, tubal, and probably ovarian) are going through a rhythm, and she will "sit" until the cycle of her ganglia has completed its rhythm.

Now, there exists a diversity of opinion as to whether the œstrus and menstruation are one and the same process. The question cannot be settled by mere assertions. For men to call each other liars will not alter facts, though it may make enemies. The argument from analogy that œstrus and menstruation are similar processes is quite strong. The uterus is the only organ in the body that loses blood by a physiological process. The uterus loses blood in a similar manner in the rut as it does in menstruation. Both rut and menstruation are periodical, and both have some close connection with fecundation. So far as I can see now, rut and ovulation take place at the same time in the animals (I carefully examined over 225 pigs, and some cows, sheep, and dogs). Especially in the sow I observed that, when she was in rut, a distinct crop of ovules was about ripe. I also observed sows' ovules ripe at times between the ruts, but they were irregular, straggling ovules, and looked like fruit picked before its time. The irregular ripened ovules between the times of rut did not appear like normal ovules. They had some pathology in their physiological process. Hence, so far as I have studied (which is insufficient), it appears that rut or œstrus and ovulation occur at the same time in animals. Again, the objective and subjective symptoms of rut and menstruation are about the same. The objective symptoms, detected by smell and eyesight in rut, were to attract the males. The same objective symptoms occur in women in menstruation, but man is so aggressive that he does not need his attention called to the matter. The smell is caused by exalted action of the sebaceous glands and fluid decomposition; the color and enlargement of parts by congestion.

It is said that the subjective symptoms of rut and menstruation are not the same in animals and woman, because the animal willingly receives the male in rut, while the woman will not willingly receive the male during menstruation. I think this argument is not reliable, as the greater mental power of woman enables her to conceal more effectually the sexual desires. Now, woman knows that she is not clean at the menstrual period, and her innate pride impells her to object to be handled and examined when she knows she is soiled. She is averse to allowing man to know and see her weakness. But just before the flow and just after the flow, women are quite willing to engage in congress. In some animals the rut has exactly similar manifestations, for farmers well know that the mare will receive the stallion vigorously after the rut, or even just after having a colt. But this is not just exactly similar in cows, sheep, and dogs, as not one of the last three wants the male immediately after parturition as the mare does. So that the time of the greatest willingness to receive the male in sexual congress differs with many animals, and is not very significant proof in any single case.

Then, too, copulation of animals and women differs, but that may be owing to the cultivation of habit. Animals generally only cohabit at the times of rut, while woman cohabits at almost any time of the year. Yet this argument also falls, for one can watch the salacious monkey, and see him taking about all seasons to masturbate. In confinement, the male monkey seems to take every opportunity to have congress with the female. And the common dog can be seen going round absolutely soliciting congress from males. So that habit and environments really change the methods of copulation.

However, in woman ovulation and menstruation do not always take place together, and this is the basis of the argument that rut and menstruation are not the same thing. Menstruation is a periodic process of a woman's uterus and tubes, while ovulation is an occasional process of the ovaries. Both may occur separately or together. The earth and moon circle around the sun, and, though they seldom interfere with each

other's light, there will certainly come a time when the moon will get in a line between the earth and sun, and an eclipse will result, because the earth and moon go around the sun differently.

Menstruation is a periodic process of the tubes and uterus for some 30 years, while ovulation is a constant process of the ovaries from before birth until the ovarian tissue is worn out. I saw myself a woman at 70 years of age whose ovary was ovulating. Menstruation is a temporary periodic process at a distinct age of life, while ovulation is a life process. The process of menstruation may be looked on as totally different from ovulation, and then it will probably be regarded as a different matter from the rut of animals.

Since woman and monkey really menstruate, it might be supposed that the upright posture changed the rut into menstruation. By an upright position the uterus was compelled to change its form and structure. It had to acquire integrity of structure sufficient to keep its own erect posture without kinking. It then really lost its horns, which were lost in the uterine body. Its lymphatic system is not so sufficient as that of the lower animals, because lymphatics would not be of structure strong enough to hold a uterus upright. Woman, getting on her hind-feet, lessened the chance of reproduction, as the tube in higher animals does not open into a pouch of peritoneum containing the ovary, but is so connected with the ovary that it is apt to fail to carry the egg into the uterus. It is probable the erect posture of woman has changed menstruation somewhat.

Menstruation may be regarded as simply the renewal of a monthly nest for gestation. It is simply nidation and denidation. The endometrium perennially renews itself. The lining membrane of the uterus in its monthly rhythm freshens its nest really for gestation, whether it gets an egg to incubate or not. If such be the case, then menstruation and rut differ at least in manifestation. But all all these different manifestations of rut and menstruation can be brought about by heredity and variation. Animals stand on four feet, while man stands on two feet. The uterus of man and animals had of necessity to change its shape. Any animal that stands on its hind-feet has the same shape for its uterus that man has. I have examined the uterus of the monkey, and it cannot be told from woman's uterus. But the monkey no doubt menstruates, at least in confinement, as reported by keepers of museums. Hence it is quite doubtful if the rut, or œstrus, and menstruation are different processes. It is probable that rut and menstruation are the same process, modified by ages of heredity and variation; environments, climate, and food telling the story of change.

THE CAUSE.

The cause of menstruation is, so far, beyond our research. Later study has limited it to more distinct localities. However, the main thing we can say about the cause of menstruation is that it lies in the nervous system. Now, menstruation is a rhythmic process, and only that part of the nervous system called ganglia possesses rhythm. Ganglia alone possess the power of rhythm, or periodicity. The brain does not go through a cycle. Hence, the cause of menstruation must lie mainly in the semilunar ganglia. The semilunar ganglia are the abdominal brain. Two years ago considerable research induced me to put its cause in ganglia situated along the tube and uterus, and I called such nervous bulbs automatic menstrual ganglia. The automatic ganglia along the tubes and uterus act just exactly as Auerbach's and Meissner's ganglia do, which are situated in the walls of the intestines. It would be a waste of time to discuss the cause of menstruation, further than to say it lies in the abdominal sympathetic ganglia. The abdominal cerebrum is, of course, under the physiological and anatomical orders of the cranial cerebrum.

It may be well here to speak of the abdominal sympathetic ganglia, for visceral anatomy is to this day seriously neglected. The sympathetic ganglia of the abdomen is very large in women, as are also the nerves connecting the ganglia to the uterus. A peculiar feature of the sympathetic system supplying the pelvic viscera is that when the sympathetic nerves get into the pelvis they appear to become immediately much larger and thicker, and coalesce into many nervous ganglia situated along the walls of

the pelvic organs, especially the rectum and uterus. The size and perfection of the semilunar ganglia tell the story of a woman's menstrual rhythm. Some women have large and perfect semilunar ganglia, which also insure reliable automatic menstrual ganglia, and such women will menstruate regularly in spite of shocks, diseases, or seasons. Other women have small semilunar ganglia, and this probably accompanied with small or imperfect automatic menstrual ganglia. Such women will menstruate irregularly or not at all on account of shock, disease, or fright. Some semilunar ganglia are so small that they emit a very slight power, and a fright or slight disease will stop such a woman from menstruating.

I had a patient with such weak semilunar ganglia that the whistle of a steam engine frightened her so much that she did not menstruate for about a year. The semilunar ganglia of some girls is so weak that a bath will stop menstruation for months. The uterus and tubes, no doubt, as I suggested two years ago, get their physiological orders from the semilunar ganglia, and the semilunar ganglia set in proper motion the automatic menstrual ganglia. Hence, to the abdominal brain we must look for menstrual derangements.

It is said that girls menstruate later in life in cold climates than hot ones. The cause, no doubt, lies in the size and perfection of the semilunar ganglia. It may lie in the idea that the cold retards the growth of the abdominal brain. The semilunar ganglia are bigger in lower animals, relatively, than in man, and would appear to possess more control over the abdominal and pelvic viscera. In man the semilunar ganglia do not grow in proportion to his brain magnitude, so man's cranial cerebrum assumes more and more control over his abdominal cerebrum. In woman the abdominal brain attends to the business of nutrition and generation, but, if it goes wrong, the wrong is quickly communicated to the cranial cerebrum, and then only a balanced brain will keep a level head. If the cranial cerebrum has not got controlling will-power, the woman is inclined to hysteria. All have noticed that hysterical women suddenly acquire gases in the intestines. This is, of course, on account of derangements of the abdominal sympathetic in performing nutrition. Now, these very women soon acquire uterine trouble from the same nerve. In short, uterine trouble is soon followed by gastric trouble, and gastric trouble soon calls up uterine trouble—all through the semilunar ganglia. Few spinal nerves, if any, supply the uterus.

The gynæcologist must pay more attention to the semilunar ganglia and abdominal sympathetic if he would increase his knowledge of the process of menstruation.

[*To be continued.*]

NUTRITION AND ASSIMILATION.*

BY SAMUEL BELL, M. D.†

In casting about for a subject to present to this society, which would be utilitarian in character, the thought was suggested to the writer that the subject of nutrition had not received the attention from the profession that its importance justifies. There are undoubtedly many cases treated, in which food which will properly nourish and sustain the body and mind is more beneficial than medicine. We are very frequently importuned to use various preparations of concentrated foods as having special nutritive value and qualifications in a long list of diseases with mal-nutrition complications. In view of this it is very important that we be enabled to discriminate and make our selection with a knowledge of their contents and their adaptation in each and every case. Nutrition, properly considered, is the process by which the physiological decay of the tissues and fluids of the body is compensated by the appropriation of new matter. It is the great function to which all others are subservient, including circulation, respiration, absorption, digestive and alimentative secretion. Apropos of the study of the nature of the chief forces involved in nutrition in the highly organized parts, as the brain or muscles and internal organs, or in the tissues

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called extra-vascular, such as the nails, hair, and cartilages, the intimate process is as yet unknown. The phenomenon attending the general interchange constantly going on during life has been the object of faithful study, and satisfactory results have been obtained. But we cannot explain the nature of the causative force of nutrition any better today than the ancients with their meagre knowledge of applied physiology. The materials for nutrition are supplied by the blood in requisite quantity, and oxygen, which is indispensable to all processes of organic life, is introduced through respiration. The demands made constantly upon the blood, by the system, for new material is continually supplied by the introduction of new matter through the processes of alimentation and digestion. Just what causes parts of living animal organisms to undergo change into effete matter, incapable of any further animal function, and what it is that gives those parts the power of self-regeneration are questions which have ever baffled the scientific enquirer, and in all human probability ever will.

To return to the subject of foods more directly, it is proper to consider, first, a few of the principles which should guide us in forming a proper estimate of the nutritive value of the different preparations of food. Man, being an omnivorous animal, derives his sustenance from the three kingdoms of nature. The non-nitrogenized matters, comprising the sugars, starch, and fats, are supposed by many to be exclusively concerned in keeping up the animal heat of the body by the oxidation of carbon, consequently they are familiarly referred to as the hydro-carbons. It is a well-known physiological law that the nitrogenous or albuminous principles are essential to animal life; they alone contain the elements necessary for the supply of new tissue, taking the place of worn-out and effete matter. The primitive cells, together with the animal fluids of the organism, are composed of albuminoid materials, aside from the water which they contain. During the life of the organism there is a constant change. An increase in the quantity of hydro-carbon, with a decrease of the proteid matters, will not keep up the equilibrium of the retrograde change, which is necessary for the maintenance of health. Hence, no substance can be utilized permanently by the human economy unless it contains nitrogenized matter in an assimilable form. Neither is it sufficient that a food contains nitrogen alone; in order that it may be used by the body it must be in combination, as in a proteid molecule. This point will bear recapitulation: Nitrogen, *per se*, or in many of its combinations, is valueless as a food; nitrogen, in combination with proteid matters, is the one essential, peculiar form suppplying the highest type of nutrition. It must be remembered that it is not the quantity of nitrogen, but the combination, that makes it so valuable in building up worn-out tissue and supplying energy, nerve-force, etc.

"It is highly astonishing that for the establishment of a rational nutrition of the domestic animals, even with the aid of the Government, so many forces are active, while hardly anyone seems to take an interest in the proper nutrition of man." When Prof. von Voit, of Munich, pronounced these words, in the year 1877, he was fully entitled to do so, for up to that time very little positive work had been done in that direction, but since then a marked change for the better has been observed. Through the investigation of German experimenters, and especially through the work of the Munich school, instigated by Prof. von Voit, a great deal has been added to the knowledge of nutrition of man, and, based upon this enlargement of theoretical knowledge, the structure of a dietetic of daily life is arising from a solid physiological foundation. The human body consists of a number of substances or chemical compounds. They are either inorganic, viz., water, ashes; organic, viz., albuminoids (gelatinous substances), fats, hydro-carbons (a very small amount). These substances form the tissues (muscles, nerves, bones, which consist of cells or their offsprings, the blood to be considered as fluid tissue, and the organs as consisting of various tissues), and fluids of the body in which the various functions are manifested that are essential for maintaining life and developing certain forces—production of heat and mechanical labor. This causes a continual exchange of substance, a continued metamorphosis, of

which a certain amount of wasted substance is the result, leaving the body in the form of excretions. We speak here of continued expenses of the body, which have to be balanced by substances introduced to take their place. The consumption or the metamorphosis, however, goes on whether substances are taken in or not. In the latter case the body consumes itself; there is a loss of substance, and, if this continues, it will perish by emaciation and inanition (starvation). Nutrition is only satisfactory when expenses and income balance. There are two means by which the receipts are taken in, viz., by respiration and by digestion. By the first, oxygen is introduced; by the latter, a series of substances, of chemical compounds, which are contained in the food and are termed alimentary principles. These are introduced by the mouth, and then by the act of digestion are so prepared and dissolved as to be absorbed by the walls of the alimentary canal. They enter into the alimentary fluids of the body, and by means of the circulation are transported to the different parts of the body, where in the tissue (cells) they come in contact with the blood, being saturated with the oxygen of the inspired air in passing through the lungs. The alimentary principles correspond to the above-mentioned substances of which the body is composed, viz., water, ashes, albuminous (gelatinous) substances, fats, and hydro-carbons. They have different value for nutrition. In considering the various substances, we may as well neglect water, as it forms the greater part of all articles of food, and can easily be obtained. The inorganic salts (ashes) are also always found in sufficient quantity, so we will direct our attention principally to albuminoids, fats, and hydro-carbons.

While the water (H_2O) leaves the body in the same form in which it is introduced, and also the inorganic substances in corresponding chemical compounds, the organic substances undergo such thorough transformation that they cannot be directly recognized in the excretions. The principal elements of the excretions are carbonic acid in the expired air and urea in the urine, and herein, practically, are the most important elements for nutrition—in the carbonic acid, the carbon (C); in the urea, the nitrogen (N). At large we may measure the importance of the organic alimentary substances for nutrition by the amount of carbon and nitrogen they contain, and therefore the albuminoids (and, to a limited degree also, the gelatinous substances) containing both carbon and nitrogen are to be considered of greater value than the fats and hydro-carbons, which contain C, but no N. Hence, aside from the classification of organic and inorganic, the alimentary substances can be divided into nitrogenous and non-nitrogenous. By a series of physiological experiments, on different individuals, made under different circumstances, it has been found that in an adult, well-developed, middle-sized, laboring man the average expenses for one day are:

19 grammes N = ʒ v.
330 " C = ℥ xi.

This makes necessary the introduction of:

120 grammes = ʒ iv albuminoids.
60 " = ℥ ii fat.
500 " = ʒ xvi hydro-carbons.

For individuals in other conditions the supply must be modified, according to age, sex, weight, bodily development, race, climate, season, and occupation. These are all which time will allow me to mention, though we may add some physiological notes answering for the fixation of the above figures. The greater the capacity of the muscles (tissue containing nitrogen), and the more these are exercised, the greater is the daily demand for N (nitrogenous food), in order to sustain the standard of the muscular tissue. The more labor (physical and mental) is performed, the greater is the amount of carbon required (food containing carbon). But, as there can be no reasonable desire to increase the amount of *albuminoids* beyond what is necessary to sustain the equilibrium of nitrogen (which Prof. von Voit has found by experiments to be supplied at an average of 120 grammes or ʒ xvi of albuminoids) the surplus of N being eliminated by the kidneys, causing not only a waste (which for reasons of economy is technically termed luxury consumption), but also overcharging the functions of these organs, and as, further, 500 grammes, or ʒ xvi, is about the limit of hydro-carbons (according to Voit) to the capacity of the digestive organs, the increased demand for carbon must be supplied by *fat.*

It must be added that the plain nourishing substances are not sufficient, but the system requires, also, stimulants and natural and artificial condiments. The natural is that which gives the peculiar taste and flavor to the nourishments, which renders them agreeable to the senses. As stimulants, we may mention alcoholic beverages, tea, coffee, beef-tea, etc., and some spice in the real sense of the word, as pepper, mustard, vinegar, etc. Further, the relishment is promoted by the process of preparation of the food, as cooking, frying, stewing, etc., and, lastly, *variety* is to be considered as an important factor. One- to two-thirds of the food should be of animal origin.

Finally, we must consider the degree of utilization. We cannot enter into details, further than to say that, on an average, of the food taken in from the animal kingdom 0–5 per cent. remain unabsorbed, and of that taken in from the vegetable kingdom 15–20 per cent. The method of preparation has a great deal to do with the degree of absorption. As a nutriment, milk stands at the head of the list, both in health and disease, as it contains all the elements of nutrition necessary in a fluid form—the particles of fat, minutely divided, and the inorganic salts in solution. The average composition, according to Prof. E. König, of Berlin, is:

Casein	4.7	per cent.
Hydro-carbon	4.2	"
Fats	3.9	"
Inorganic salts	1.0	"

We meet with people, both in health and disease, who do not bear milk well in its natural state, although, in the majority of individuals, if a small amount is taken at a time, and that slowly, a tolerance will be established. With some patients sterilization is necessary. This may be readily and quickly accomplished by heat. The method of Soxhlet, of Munich, is as follows: Put milk into a number of bottles with rubber corks with hole for stopper, and put in steam from boiling water. The germs will be destroyed in from ½ to ¾ of an hour (called Soxhlet's sterilizator).

The addition of cornmeal, oatmeal, and barley gruel is beneficial in proportion of ⅓ to ⅔ of milk.

Clinical experiment has shown that the addition of alcohol to milk, in the form of cognac, about 5 per cent., is beneficial by stimulating the muscular fibres of the stomach, thus increasing the rotatory motion of this organ, and in this way mechanically emptying the stomach sooner and stimulating the secretion of the glands. The experiments with the addition of alcohol to the milk have shown no direct changes in casein or any of the elements of milk.

Peptonized milk, composed of:

Maltose	33.8	per cent.
Milk sugar	2.6	"
Dextrin	8.6	"
Albuminoid	9.8	"
Fat	12.2	"
Inorganic salts	2.2	"

Artificial cream compound, prepared by stirring 60 grammes (2 oz.) of white of egg with 300–350 c.cm. of water; add 4 grammes hydrate of potash with 60 c.cm. of water. This is a gelatinous mass, well mixed and washed, then heated, with the addition of 120 grammes (4 oz.) sugar, 150 grammes (5 oz.) butter or fat, and enough water to form a milky emulsion; add also the salts of milk:

Phosphate sodium.
Phosphate oxide iron.
Chloride sodium.
Chloride potash.
Hypophosphate of calcine.
Carbonate of magnesia.

This preparation keeps well, and is very easily digested, as it contains no casein of cow's milk, but albuminate of potash, which is easily peptonized directly without coagulation. It contains:

Proteids	1	part.
Fat	2.5	parts.
Sugar	0.4	"
Salts	0.2	"

Milk is not indicated in acute cases of diarrhœa, with a tendency to vomiting, nor in acid dyspepsia. But it is indicated in all cases of acute and chronic febrile diseases, and especially in connection with consumption.

A very good dietetic in certain diseases is buttermilk. It contains the same alimentary substances as milk, with less fat and sugar, but, in addition, lactic acid, which gives it an

agreeable fresh taste and a slightly laxative effect, which renders it benefical in acute and chronic febrile diseases where there is a tendency to constipation. It is contra-indicated in peritonitis, enteritis, and dysentery. Its utility as a dietetum in fevers is not sufficiently appreciated. It is easily procured and willingly taken by patients.

Kumyss. The original kumyss, or tshigon, is a beverage prepared by acid or alcoholic fermentation from mare's milk, already known to a limited extent in olden times, but its therapeutic usefulness was recently brought to the notice of the profession. It was originally obtained by pouring fresh mare's milk directly in leather buckets and mixing with remnants of old kumyss, then exposing to moderate heat, frequently shaking. In two or three days the kumyss is finished. Now, instead of leather buckets, oblong, cylindrical vessels of wood are employed, and the stirring is accomplished by moving a horizontal perforated board up and down. Under the influence of moderate temperature the ferments of the old kumyss produce a double fermentation, a lactic acid and an alcoholic. The greater amount of sugar contained in mare's milk disappears, and in its place lactic acid, carbonic acid, and alcohol are formed. The chemical composition of genuine kumyss would be:

Proteid substances	2.20 per cent.
Fat	2.12 "
Sugar	1.53 "
Lactic acid	0.90 "
Alcohol	1.72 "
Carbonic acid	0.85 "
Salts	0.29 "

It varies according to the composition of the milk used for the preparation. A kumyss of three days contains less sugar but more carbonic acid and alcohol than that of 36 hours. The fact is remarkable that during the process of fermentation the casein is changed. A greater or less quantity of it is converted into a pepton-like body; the same takes place in milk and kefyr, which I will mention later. Kumyss may also be prepared from cow's milk in the following manner: Fresh, warm milk is poured into long, narrow cylinders of wood, which contain about one-tenth of old kumyss. In winter these are placed near the stove, but in summer the surrounding temperature is sufficient. It must be stirred every five minutes with a stick. The fluid is ready for bottling as soon as bubbles arise. To test it, a portion is put into a cone-shaped glass and left to stand. It is filled in champagne-bottles, and the cork secured with string. A preparation similar to kumyss in its effect is made by the following method: Fill a carefully cleansed champagne-bottle to five-sixths with fresh skimmed milk; add one-half teaspoonful yeast and one teaspoonful of pure grape sugar; stop with a cork secured with string, and expose to moderate temperature for two days for fermentation. The kumyss prepared from cow's milk contains more proteids than the genuine, and also more salts, and differs very much in regard to lactic acid, carbonic acid, and alcohol, as is shown by chemical analysis.

Cow's milk kumyss of 36 hours:

Proteids	3.35 per cent.
Fat	2.07 "
Sugar	1.87 "
Lactic acid	0.70 "
Alcohol	1.90 "
Free carbonic acid	0.80 "
Inorganic salts	0.52 "

Cow's milk kumyss of 48 hours:

Proteids	3.12 per cent.
Fats	1.95 "
Sugar	1.62 "
Lactic acid	0.83 "
Alcohol	2.10 "
Carbonic acid	0.92 "
Inorganic salts	0.53 "

According to the analysis, the genuine kumyss and that prepared from cow's milk are both nutritive and stimulant. It has an agreeable, sour taste like buttermilk, sparkles like champagne, has an exhilarating and, taken in larger quantities, even an intoxicating effect. It also increases the secretion of urine. Fresh kumyss of 24 to 36 hours does not agree as well with most individuals as does kumyss of 48 hours. The former causes slight *malaise* and watery stools, the latter is generally taken without any disturbance. Kumyss older than 48 hours causes a peculiar, burning sensation in the epigastric region; no diarrhœa, but slight constipation. When patients bear it well and take it for weeks and months, a remarkable nutritive

effect is apparent: the patient gains in strength, the weight of the body is increased, the lost appetite returns, and pathological secretions disappear. This explains the success of kumyss cures in cases of anæmia, general weakness, exhaustion after continued mental labor, and especially of chronic bronchial catarrh, chronic pleuritis, and chronic tuberculosis. In the last three diseases the value of kumyss is shown by the careful observations of Russian physicians. It has also been found useful in the nausea and vomiting of pregnancy. It must be avoided in cases having a tendency to lung hæmorrhage or apoplexy, in plethora, ulcers of the stomach, in cystitis and nephritis. The kumyss treatment should be commenced with one bottle of weak kumyss, then two, then gradually pass to the stronger, in the same way increasing the quantity until from six to ten bottles are used a day. The laxative effect observed in the beginning of the treatment soon disappears, especially when the stronger kumyss is taken.

Kefyr, which of late has entered into competition with kumyss, has a composition and effect similar to kumyss. The active principle in the preparation is the seeds of the kefyr plant, which contain a quantity of yeast-cells and filiform bacilli. These cause acid and alcoholic fermentation in the milk, and the casein is partly converted into peptone, just as with kumyss.

The seeds are placed in water of moderate temperature for from 5 to 6 hours; then in a glass of milk, the latter changed 2 or 3 times every 3 hours. The soaked seeds arise to the surface and are now ready for use. To two glasses of milk take one tablespoonful of seeds; put both in a clean bottle; close it with a piece of muslin, and expose to a temperature of 65° to 68° F., frequently shaking. The analysis of kefyr is:

Protein	3.8 per cent.
Fat	2. "
Sugar	2. "
Lactic acid	0.9 "
Alcohol	0.8 "

By whey (*molken*) we understand the fluid substance that remains after separating from the milk the casein and fat. This is a very weak solution of sugar of milk, albumen, peptone, and inorganic salts. It may be sweet or sour, according to the preparation. In preparing, rennet is employed, 1 part to 200 fresh milk, heated to 95°–105° F., strained, and thus sweet whey is obtained (*serum lactis dulce*). Sour whey (*serum lactis acidum*) is obtained by boiling 200 parts of cow's milk, adding 1 part of *tartarus depuratus* and straining. *Serum lactis aluminatum* is obtained by adding to 200 parts of boiled cow's milk 1 part of alum. There is also a *serum lactis tamarindinatum*, which is prepared by adding to 200 parts of boiled milk 4 parts of *Pulpa tamarindorum*, and then straining. The average composition of sweet whey, according to J. König, is:

Albumen	0.8 per cent.
Fat	0.2 "
Sugar	4.7 "
Lactic acid	0.3 "
Inorganic salts	0.6 "

The effect of whey, containing, as it does, albumen, sugar, and inorganic salts, is slightly nutritive. The use was formerly indicated in cases of tuberculosis, chronic catarrh of the lungs, and chronic pleuritis, and a favorable result was awarded to its laxative effects. It is not much used to-day. *Serum lactis tamarindinatum* has a stronger laxative effect, and is applied in habitual constipation. *Serum lactis aluminatum* has an astringent effect, and is used in chronic enteritis and dysentery.

CLINICAL NOTES—THE THERAPEUTIC USES OF LIQUOR SEDANS—OSSIFICATION OF CHOROID.

Liquor Sedans as a Therapeutic Agent.—Dr. H. DeFord Patee, Topeka, Kas., reports the following case: Mrs. J., æt. 46; mother of nine children; has suffered for the past 18 months with ulceration of the uterus; her menses have been extremely regular, but always accompanied by flooding. She was admitted for treatment 14 days ago. On examination a marked induration was found about the middle of the cervix. The os was slightly dilated, with a deep ulcer on the internal edge. The induration was diagnosed as polypi, and removed. The operation was about one week prior to the regular period. No untoward symptoms were noticed or felt until the third day. The afternoon of the

third day severe pains began in the right iliac region. Hot applications were applied, but the pain became more general in the pelvic region, and soon extended to the umbilical region. She was immediately placed upon treatment for acute peritonitis, but no relief was given. I then concluded there was rigidity of the os and cervix. I ordered liquor sedans, one teaspoonful every three hours, with two drops of nux at each dose; linimentum terebintha to be applied externally from the epigastrium to the pubes. In eight hours she began to flow freely, and made a rapid recovery.

Dr. J. W. Langford, Montpelier, Idaho, reports: Mrs. R. H. L. was confined last August; labor normal; was able to be up on the eighth day; continued to be up from that time. I was called to see her on Sept. 25th; found her extremely nervous and complaining of dizziness and faintness, with palpitation; considerable amount of cervical leucorrhœa; great uneasiness and fear of impending danger; frequent urination after being much on her feet, with bearing-down pains in back and groins; much tenderness on pressure on pelvis and along the left groin. Diagnosis: Pelvic peritonitis from laceration of cervix with anteversion and induration, and perhaps tumor of left broad ligament. Placed her on a strengthening treatment and prescribed tincture macrotin and fl. e. viburnum, ää, one teaspoonful every three hours, with Emmet douche. Improved nicely until about three weeks had elapsed, when she was taken with dizziness again, with violent pain in the head, slight chills. Next morning nearly a pint of thick yellow pus, streaked with blood, passed from vaginal canal; was very weak for several days, after which she gradually regained her former strength. In about three weeks she again had the same symptoms, with about the same discharge of pus. About this time I received the sample of liquor sedans, and determined to test it. I prescribed Liquor Sedans No. 1, with malt extract, iron, quinine, and strychnine, four times per day. It has now been six weeks since she commenced this treatment, and has had no return of those sinking spells. The discharge from the uterus has gradually become less, until it is now almost *nil*.

Ossification of Choroid.—The following case was exhibited before the Michigan Surgical and Pathological Society by L. E. Maire, M.D., Professor of Ophthalmology and Otology, Michigan College of Medicine and Surgery:

The case of Miss H., aged 26, of Montpelier, Ohio, was referred to me by her family physician, Dr. J. A. Weitz. When a child she lost the vision of the right eye, cause not known, and a few years afterward she received a blow over the right eye, which caused a great deal of pain and inflammation, this latter finally disappearing.

Of late years she has suffered from repeated attacks of pain and tenderness of the right eye, which during these attacks would look congested and inflamed. Within a year the left eye has been affected with occasional attacks of epiphora and shooting pains, especially when the right eye became tender and inflamed. The patient consented to enucleation, which was performed September 16, 1891, Dr. J. A. Weitz placing the patient under chloroform.

Condition of eye before enucleation: No reflex from fundus present, epiphora, ciliary congestion, prominence of eye-ball, shriveled calcareous lens, dislocated forward, tenderness marked, tension +2, vision lost.

Examination of fellow eye shows no present trouble, fundus normal. Enucleation was performed easily, a little difficulty being experienced in lifting the eye out of the orbit previous to section of the optic nerve, which was occasioned by the eye being rather large.

Examination of eye after enucleation: The lens is shriveled and has undergone calcareous degeneration; sclera thin, and, upon opening it, fluid escapes; and a film of bone occupies the seat of the posterior one-third of the choroid. There is total detachment of the retina, except in the neighborhood of its attachment near the lens and optic nerve. It appears like a chord, and as it advances toward the optic disc it passes through a small foramen in the ossified choroid, this foramen being about a thirty-second of an inch in diameter, and having its position over the optic papilla. The bony growth is dark in color, hard and firm to the touch, and has no doubt existed in the affected eye many years.

Ossification of the choroid is frequently the result of chronic parenchymatous choroiditis. According to Knapp, it originates in a fibrino-plastic exudation, and may by its presence produce sufficient irritation to cause sympathetic disturbance in the fellow eye.

Correspondence.

ANNUAL MEETING OF THE MICHIGAN STATE BOARD OF HEALTH, LANSING, APRIL 12, 1892.

The members present were: Drs. Hazlewood, Vaughan, Gray, Baker, Prof. Fall and Hon. Frank Wells.

The Secretary reported that, during the first quarter of 1892, the reports of outbreaks of dangerous communicable diseases in Michigan were about as usual; action had been taken relative to outbreaks as follows: Diphtheria 125, scarlet fever 209, typhoid and typho-malarial fever 53, measles 34. No smallpox during the quarter. Since the close of the quarter one case of typhus in Detroit.

The reports from health officers and clerks of local boards of health are not yet always made; not much more than half of them have reported for the year 1891. A list has been made of all the townships, cities, and villages, giving the name and address of each health officer and clerk who has made his annual report as the law requires. To those who have not reported there has been sent a "Second Request for Annual Report Required by Law." This has brought in many reports, but some are still delinquent.

The Secretary proposed to the Board an amendment to the health laws, so that reports of dangerous diseases which now may be reported to either the health officer, or president or clerk of the local board, after the amendment takes effect, shall all be reported to the health officer, he being the officer required by law to act at once. This would increase the completeness and thoroughness of the work by the health officer, and it would make it possible to relieve the clerks of all townships and of most cities and villages from receiving and from making reports on this subject. It would be a welcome relief to over 1,000 officials, and would greatly lessen the work and expenses of the office of the State Board of Health. The State Board approved of the proposed amendment. The Secretary urges the amendment of law, and asks the influence of the presidents and clerks of the local boards throughout the State in the same direction.

The work of collecting and compiling sickness statistics has proceeded as usual.

The subject of dangerous contagious diseases at the State Agricultural College, the Reform School, and the State School at Coldwater was discussed, and a resolution passed requesting the Board's Committee on legislation to formulate some plan for prompt notification to the health authorities immediately on the occurrence of a dangerous communicable disease in any State institution, and for prompt action by the health authorities for the restriction of every dangerous disease in a State institution.

The Secretary mentioned having collected, from recent publications, tables, statements, and other literature bearing upon the duration of infectiousness of dangerous diseases, especially diphtheria. He has had the material hektographed for convenience of study by members of this Board and others. The material was referred to Prof. Vaughan, who was asked to continue the study of the subject in connection with the Board's pamphlet on diphtheria, with a view to its greater perfection, and to report to the Board at a future time.

The Board voted to hold a special meeting at Lansing, June 6 and 7, when the National Conference of State Boards of Health will meet at Lansing and make a special study of several methods of work by the Michigan State Board of Health.

The prevalence of diphtheria and scarlet fever in Detroit was discussed; comparisons were made with the rest of the State and with New York City. The law says: "The State Board of Health shall have the general supervision of the interests of the health and life of the citizens of this State." "They shall have authority to send their Secretary, or a committee of the Board, to any part of the State, when deemed necessary to investigate the cause of any special or unusual disease or mortality." A preamble and resolution were adopted as follows:

Whereas, More than one-tenth of the people of Michigan reside in Detroit, and communicable diseases tend to spread from that commercial metropolis to every part of the State, and

Whereas, Some of the dangerous communicable diseases are uncommonly prevalent in Detroit,

Resolved, That a committee, consisting of the President and four other members of this Board,

be appointed to visit Detroit and confer with the Health Officer and with the Board of Health of Detroit, and with other city officers, if found desirable, with the view of learning, and of reporting to this Board, so much as is possible concerning the difficulties under which the Detroit officers are laboring for the restriction and prevention of the dangerous diseases.

The Secretary presented a recent newspaper article which claimed that the kerosene oil which comes from the Ohio wells contains sulphur, arsenic, and other noxious constituents which no process of refining could remove. In view of the fact that all such poisons in oil burned go into the air to be breathed, that such oil is used in many places throughout the world, and that influenza has been unusually prevalent, any probable cause of irritation of the throat and air-passages should be investigated. Prof. Vaughan was requested to ascertain, quantitatively, the amount of arsenic in illuminating oils in use in Michigan.

The Secretary presented an account of an explosion of a lamp in Ludington, containing a brand of oil advertised by the Standard Oil Co. as "Eocene." A sample of the oil tested by the closed tester was found to flash at 110° F., and it burned at 115° F.

The Secretary reported having attended a conference of representatives of State and municipal boards of health at Chicago to formulate plans for the exhibit of methods and results of work of boards of health and sanitary officials at the World's Columbian Exposition. The Board directed the Secretary to commence the preparation of graphic diagrams, charts, and statements which will properly represent the methods and results of the work of the Michigan State Board of Health, to include comparisons of death-rates from the principal diseases in Michigan before and since the establishment of the State Board of Health. It is known that such comparisons will show a very great reduction of some of the most dangerous diseases.

AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION.

The second annual meeting of the American Electro-therapeutic Association will be held in New York, October 4th, 5th, and 6th, 1892, at the New York Academy of Medicine, 17 West 43d Street. W.J. Morton, M.D., President; H.R. Bigelow, M.D., Secretary.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

B. W. PALMER, A. M., M. D., Editor.

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DETROIT, MICH., APR. 25, 1892.

Editorial.

THE PRESENT STATUS OF BRAIN SURGERY.

Dr. Hermann Sahli, of Berne, in an address before the Swiss Medical Society,* the salient points of which are reproduced in the British Medical Journal, February 20th and 27th, 1892, summarizes his conclusions as to the present position and prospects of cerebral surgery.

While Horsley recommends deligation of the carotid in every case of spontaneous cerebral hæmorrhage to which the practitioner has been summoned within the first four hours, Sahli believes such treatment would be contrary to medical opinion, and, in the majority of cases, would either be useless or do harm.

Sahli, in the interest of patients, protests most strongly against the practice of trephining in all cases of headache which may have resisted other methods of treatment. It would be rash, without exact diagnosis of a local cause of the headache, to submit the patient haphazard, and without the smallest guarantee of success, to an operation which, in spite of all antiseptic precautions, is likely to be attended by risk.

Exploratory trephining should not be performed unless it be comparatively necessary, as this operation is not free from danger.

Tumors of the brain can be extirpated only in a diminishing minority of cases.

Horsley recommends that in suitable cases a cerebral tumor be extirpated as early as possible, and that, when the diagnosis has

*Ueber hirnchirurgische Operationen vom Standpunkte der inneren Medicin. Von Hermann Sahli. Nach einem im Schweizerischen ärtzlichen Centralverein gehaltenen Vortrag. *Sammlung klinischer Vorträge*, No. 28, 1891.

been established, the operation be not delayed beyond an interval of six weeks, if no alleviation has been attained by other means. This postulate may be theoretically correct, but, practically, an opposite view might be taken, if attention be paid to the very variable condition of the patient's health in cases of brain tumor, and to the undeniable danger of the operation.

The proposal to deal with gummatous tumors of the brain is based on erroneous conclusions as to the curative results of a long-maintained anti-syphilitic treatment. In the present position of cerebral surgery the subject of a gumma of the brain has a much better chance with medicinal than with operative treatment.

The prospects of surgery are more favorable with regard to abscess than to tumor of the brain. In the treatment of the former much good has already been done by operation, and, with still more precise methods of local diagnosis, further progress may be made.

Of the different forms of epilepsy, it is only, as a rule, in well-marked cortical (Jacksonian) epilepsy that surgical treatment is likely to be attended with good results. Still, even in cases of this variety, the results of operation have not been constant. With improvements in technical details (improved facilities for making out the affected center by electric currents and more precise localization of the primarily convulsed region by minute clinical observation) still better results may in all probability be attained.

Operations for relieving the brain of abnormal pressure in incurable affections of this organ claim more attention than they have hitherto received, since the purely symptomatic indications thus fulfilled are of very great consequence. By such treatment adapted to symptoms, the headaches associated with cerebral tumor and with tuberculous meningitis may be relieved. Trephining, has been performed with such an object in view, with division of the dura mater for the production of cerebral prolapse, with or without removal of the protruded portion of brain, is attended with certain risks, and is probably less efficacious than puncture of the ventricles. The trials that have hitherto been made of this plan are too few in number to permit of any correct judgment being formed as to the utility and the dangers of puncture of the ventricles. Puncture made without any free division of the dura mater, and by penetrating the bone and membranes with an instrument of sufficient size to allow room for the subsequent introduction of a small trocar seems to have certain advantages over puncture of a portion of brain surface freely exposed at the bottom of a large opening made in the cranial wall.

In opening the skull the trephine crown should always be used, and never the chisel, as by the concussion set up by the application of the latter instrument the danger of operative violence is probably increased to an unnecessary degree.

The surgical treatment of mental disorders, in the present state of our knowledge, is wanting in a needful scientific basis.

TUBERCULOCIDIN, A SUCCEDANEUM TO TUBERCULIN.

The devotees of medicine have this great satisfaction, that the science which they pursue is a progressive one. It does not profess to be based on revelation, like theology, and it is not fixed and settled in its principles, as is the law. Medicine is not only progressive, but it progresses by leaps and bounds. To men not yet very old the changes in the fundamental conceptions of medicine seems enormous, and there is no reason to think that we are at all near reaching finality.

Whole regions of disease invite investigation, and promise to succumb before the defined and determined attacks of recent science.

The impression already made of large bodies and classes of men in regard to the risks of phthisis and the increasing number of reports of recovery in individual cases are enough to make us hope that tuberculosis itself will be brought more under the control of medicine, and the unsanitary conditions which lead up to it and make it possible will be gradually reduced under wise and beneficent legislation. This is still the greatest problem before physicians, as the disease to be mastered is the most disastrous to the

sufferer and the most discreditable to the profession.

It is the happy case of Medicine, that she is served by chemists and physicists and biologists of every kind, and that all are eager to do for large groups of diseases what has already been done so brilliantly for others.

It not infrequently happens that out of the darkness of apparent disappointment and failure attending new discoveries or inventions may ultimately come fulfillment of hope and success.

When tuberculin was announced by Koch as a possible remedy for tuberculosis, it was thought credible by the most conservative that at last the long-hoped-for specific had been found. The unfavorable results attending its clinical use naturally led to a general expression of opinion that it would go the way of previous so-called consumption cures.

While most of the profession have long ago become skeptics as to its utility, it would appear that some investigators have continued to study the action of this remedy with the result of freeing it from some of its untoward effects and inspiring a hope that, with increased knowledge of its action, it may yet prove to be of the greatest value in combating the tuberculous process. The results obtained are at least most encouraging.

The Medical News, March 16, 1892, reports the experience of Klebs, communicated in the Deutsche medicinische Wochenschrift, 1891, No. 45, and in Die Behandlung der Tuberculose mit Tuberculocidin, Hamburg and Leipzig, 1892.

Klebs first noted that by precipitation with platinum chloride and the so-called alkaloid reagents he was able to separate from tuberculin the substances upon which the deleterious effects of tuberculin depended, leaving in solution an albumose, which he believed to be the curative agent, and to which he has given the name *alexin* or *tuberculocidin*. Experiments upon animals showed that tuberculocidin fails to exercise the depressing influence upon the circulation that tuberculin does, and that, unless the dose be excessive, there is no febrile reaction. On the contrary, the treatment causes a dissipation of hectic fever. He believes that the efficacy of tuberculocidin depends upon an influence exerted on the tubercle-bacilli, resulting in their degeneration. Thus, large doses, by causing rapid disintegration of tubercle bacilli, cause some elevation of temperature by a form of auto-inoculation with tuberculin. Tuberculocidin does not cause necrosis of tuberculous tissue, with dissemination of bacilli and the development of a miliary tuberculosis. The process appears to be one of involution, associated with exudation. That tuberculocidin is not merely an attenuated form of tuberculin is demonstrated by the fact that, although the former represents by weight one-fortieth of the latter, an injection of a decigramme (0.1) of the one is followed by no elevation of temperature, while an injection of two and a half milligrammes (0.0025) of the other is followed by febrile reaction. In man the initial dose of tuberculocidin is about two milligrammes (0.002); if this occasions no unpleasant manifestations, the dose is rapidly increased to a decigramme (0.1), or a decigramme and a half (0.15). Hectic fever constitutes no counter-indication; energetic treatment may cause its disappearance. The injections should be made daily for a month, and then be intermitted for a month, to be resumed or not, according to the indications present. When indicated, other therapeutic measures may be advantageously employed in conjunction with the injections. Nearly a hundred cases, principally of pulmonary tuberculosis, have been treated with tuberculocidin. Of seventy-five in which a reasonable time had elapsed, fourteen were cured, forty-five were improved, fourteen remained unimproved, and two died. Complications were universally wanting.

A SUCCESSFUL TREATMENT OF URETHRITIS.

C. E. Cotes, B.A., M. B. Cantab., F.R.C.S., under the title of "A New Treatment of Gonorrhœa," reports his favorable experience with a method of treatment which he describes in detail.

The main points of the treatment are: The treatment rests in the hands of the surgeon instead of being left to the patient. The urethra can be thoroughly cleansed, so that there is no doubt that the remedy is ap-

plied directly to the affected mucous membrane. Examination of the urethra by the endoscope immediately after micturition and injection almost always shows that there is still a thick coagulated discharge adherent to the walls, indicating the mechanical difficulty an injection would have in acting directly on the mucous membrane. The exact extent of the inflammation can be seen, and the remedy applied to the extreme posterior boundary. The remedy is applied to the urethral walls when they are distended and stretched by the endoscopic tube, so that all furrows are obliterated. Stronger applications can be used with safety because the remedy is no longer applied blindly or by unskillful hands. There is no fear of carrying the infected material to the distal part of the urethra, and thus giving rise to complications.

The *modus operandi* Dr. Cotes describes as follows:

The patient is first made to micturate, and thus remove the discharge from the urethra as far as possible. The endoscopic tube, warmed and oiled, is then passed into the urethra, the patient lying on a couch. As a rule, the passage of the instrument gives rise to but slight pain, but occasionally in sensitive patients, or where inflammation is very acute, a 10-per-cent. solution of cocaine previously injected up the urethra will be found useful. The urethra is then thoroughly mopped with dry cotton wool fixed in a stilette and examined by the electric light.

It is important not to pass the endoscope needlessly far beyond the posterior limit of inflammation, which is usually sharply defined. The diseased membrane should be now carefully remopped with dry cotton wool, so as to remove every vestige of secretion and have a perfectly clean surface. A mop of cotton wool on a stilette, and charged with a solution of silver nitrate (ten grains to the ounce of water), should then be passed down the endoscopic tube and thrust through its distal aperture. The tube and the mop are then withdrawn simultaneously. By this means the walls of the urethra contract upon the mop, and are thoroughly moistened by the solution. For the two inches of the urethra near the meatus a fresh mop is used, so as to completely saturate this portion of the passage, in which the disease commences, and where also the inflammation is most intense. The patient will always complain of slight burning pain for a few minutes; but this gradually passes off, and in ten minutes or so he feels quite comfortable.

He is recommended to take a hot bath at night and to remain quiet, in bed if possible, the following day. The diet is regulated as usual. A saline purgative, with an alkaline or copaiba mixture, is given internally, and the patient is instructed to use a mild cleansing injection. A glass syringe with a bulbous nozzle, holding *only* two drachms, is used. The patient, having micturated, should fill this syringe with hot water, and, removing any air that remains, insert the nozzle between the lips of the meatus, keeping it on the floor of the urethra and pressing these lips from side to side on the nozzle. He now carefully empties the syringe up the urethra. As the meatus is a vertical slit, if he presses the lips on to the nozzle vertically the aperture will gape, and so the injection will escape by the side of the nozzle and not pass up the canal. Hence the importance of lateral pressure. This warm water is simply intended to clean out the passage. Now he takes the medicated injection and uses it in a similar manner, only this time he removes the syringe, but keeps the injection up the urethra quite half a minute by pressing tightly the lips of the meatus. As regards the frequency of injection, the oftener the better—quite six times a day, but not the last thing at night time, as the distension of the canal which may result predisposes to chordee. Use only a two-drachm syringe. If this amount be injected into an inflamed and thickened urethra, not to mention its tendency to spasm, more of the urethra must be distended, and this is not only unnecessary, but, for manifest reasons, unadvisable.

Forty-two cases of acute gonorrhœa have now been treated in this manner. With two exceptions the condition had existed in every case for many days, and in several instances was associated with severe chordee. The average time taken before these patients were well was a little under twelve days.

Book Notices.

DISEASES OF THE EYE—A Hand-Book of Ophthalmic Practice. By G. E. de Schweinitz, M. D., Professor of Diseases of the Eye, Philadelphia Polyclinic; Ophthalmic Surgeon to Children's Hospital and to the Philadelphia Hospital; Ophthalmologist to the Orthopædic Hospital and Infirmary for Nervous Diseases; Lecturer on Medical Ophthalmoscopy, University of Pennsylvania, etc. Forming a handsome royal 8vo. volume of more than 600 pages. Over 200 fine wood-cuts, many of which are original, and 2 chromo-lithographic plates. Price, cloth, $4.00 net; sheep, $5 00 net. W. B. Saunders, Philadelphia, Publisher. 1892.

This work is a very full and clear exposition of the methods of examining eyes, and of the symptoms, diagnosis, and treatment of ocular diseases. The illustrations are excellent. They happily elucidate the lessons of the text.

Among the features of the book which will commend it to the student and practitioner are:

The systematic directions for recording each case of ocular disease and for making the examinations necessary to lead to an accurate diagnosis, beginning with direct inspection of the eye, and passing in review one method of precision after the other until all the functions of the organ have been investigated

The careful explanation of the two methods of ophthalmoscopy, and the cautions which help the student to use the ophthalmoscope properly and prevent him from falsely interpreting its findings.

The judicious classifications of the various diseases of the eye, facilitating their study, together with useful tables for differential diagnosis.

The symptom-grouping, which, with each important general disease, precedes the special symptoms of the various types; *e. g.*, in glaucoma, cataract, iritis, choroiditis, retinitis, optic neuritis, etc.

The careful pointing out of the indications for treatment, and the detailed methods of treatment, both medical and surgical.

The explicit directions for preparing a patient, the hands of the surgeon, the dressings, and the instruments preparatory to an operation, and the detailed description of the steps of the important operations.

The selection of the illustrations (nearly one-third of which are new), which materially facilitate the understanding of the directions.

Dr. James Wallace contributes some admirable chapters, in which he considers General Optical Principles, Normal and Abnormal Refraction, Astigatism and Presbyopia, Spectacles and their Adjustment, The Ophthalmoscope and its Theory, Causes of Concomitant Squint.

Dr. Edward Jackson gives the reader the benefit of his expert knowledge of Retinoscopy, which is a helpful, practical description of the method of determining refractive error.

The publisher has produced the work in good form, and we can commend it to our readers as a most complete and sterling presentation of the present status of modern knowledge concerning diseases of the eye.

THE COSMOPOLITAN FOR MAY.

Considerable interest has been manifested regarding the first number of the Cosmopolitan Magazine to be issued under the editorial management of Mr. Howells. The magazine has furnished a list of names which promises something quite unusual for the May number. The authors whose work appears in this issue are: James Russell Lowell, Thomas W. Higginson, Murat Halstead, Edmund Clarence Stedman, Brander Matthews, Edward Everett Hale, Edgar Fawcett, Richard L. Garner, John Hay, Luther Guy Billings, Henry James, Prof. S. P. Langley, Frank R. Stockton, Dudley Buck, Theodore Roosevelt, H. H. Boyesen, Sarah Orne Jewett, Gertrude Smith, Lilla Cabot Perry, William Wilfrid Campbell, William Dean Howells.

And the same number is illustrated by Walter Crane, C. S. Reinhart, Wilson de Meza, E. W. Kemble, George Wharton Edwards, Charles Howard Johnson, William M. Chase, F. S. Church, Frederic Remington, Dan Beard, Henry Sandham, Louis J. Rhead. A well known New York critic, who has examined the proof sheets, pronounces it the

strongest number of an American magazine ever issued.

The May issue will be noteworthy on account of the change in the style of illustration. With hardly an exception, the number is entirely made up of original works of art. The names of Walter Crane, the English decorator, W. M. Chase, E. W. Kemble, F. Remington, C. S. Reinhart, etc., are enough to distinguish the issue alone.

From the prospectus of the Cosmopolitan we learn it is flourishing. The American News Company state that news-stand sales have increased nearly a thousand per cent. during the past three years.

A System of Gynæcology. With three hundred and fifty-nine illustrations. Based upon a translation from the French of Samuel Pozzi. Revised by Curtis M. Beebe, M.D., Chicago. 604 pages. Published by J. B. Flint & Company, New York.

This work is the result of many years of practical experience by the author as Chief of the Hospital Service at Louraine, which is devoted especially to diseases of women.

The author formulates some statements which gynæcologists may regard as representative of what is now regarded as the most intelligent opinion, both in this country and abroad. For example, he says: *"It has become of greater importance to avoid infection of the wound than to perform a brilliant operation. Let us profit by experience and avoid the operator's excesses, into which some of us have too often fallen."*

The book presents a candid statement of the present conditions and requirements of gynæcological art. It dwells at length upon the more recent gynæcological operations, and is based not only on the author's experience, but on his personal study of the methods of the principal gynæcologists of England, Germany, and Austria, and the Faculté of Paris.

The Physicians' Leisure Library. Published by Geo. S. Davis, Detroit, Mich. Paper, 25 cents; cloth, 50 cents.

With the issue of "Cancer," a very exhaustive and valuable little book, just published, by Daniel Lewis, M. D., Series V of this popular and widely-read Library is completed. Two handsome colored full page lithographs, illustrative of certain forms of cancer growth, add value to Dr. Lewis's volume.

Series VI opens with Volume I of "The Uses of Water in Modern Medicine," by Simon Baruch, M. D. Hydrotherapy has an enthusiastic and able champion in Dr. Baruch, and his thorough exposition of the therapeutic value of water will undoubtedly prove very popular. Volume II will be published very shortly.

In "The Electro-Therapeutics of Gynæcology" A. H. Goelet, M.D., has compressed within the limits of two small volumes a vast amount of helpful suggestion and valuable information, which will be appreciated not only by specialists, but by all medical men who desire to learn just how to apply electricity to best advantage in their daily practice. These volumes, which are handsomely illustrated, are just out, and are Nos. 3 and 4 of Series VI.

Harmonized Melodies. A Book of Old and New Songs.

"Let me make the songs of a nation and I care not who makes the laws." That songs do much to foster contentment in the home, to lighten work, to inspire the valor of the soldier and stir the finer emotions of human nature, cannot be questioned.

"Harmonized Melodies" is the name of a new volume of songs published by F. Trifet, 468 Washington Street, Boston, Mass.

By presenting to the musical world a collection of 400 songs, giving not only the words and solos, but all the instrumental accompaniments complete, the publisher of "Harmonized Melodies" has preserved for modern use scores of the dearest and most pleasing songs of our century.

The arrangement of the music is a special feature of the volume, and is the work of Charles D. Blake, the Boston composer.

No one need say, "I cannot sing the old songs," who has a copy of this book. A glance through the table of contents shows that the best of the old songs, as well as the new, are in the book.

The volume, which has 256 pages, will be mailed postpaid to any address for 60 cents, in paper, or $1 in board covers.

Notes and News.

Castration as a Punishment for Crime.—

At a recent meeting of the New York Society for Medical Jurisprudence, Dr. William A. Hammond, of Washington, read a paper entitled, "A New Substitute for Capital Punishment and Means for Preventing the Propagation of Criminals," in which he states:

"A man places greater value on his generative powers than on his life. As a French writer has said, 'the dignity of a man resides in his testicles.'

"The author has several times put the question to criminals under sentence of death, and they all said they would rather hang than be deprived of their testicles.

"Castration would have the effect of making the criminal of some use to society. A dead man is of no use to society, and a man in prison is almost as bad. There are many occupations that would be open to him; he could occupy any position in which boldness or originality are not essential. Possibly he might make a good clergyman. He would not make a soldier, or a sailor, or a policeman, but he could edit a mild newspaper or make an efficient member of the legislative body. The value of eunuchs as singers has long been known. They would make excellent dry-nurses and safe typewriters.

"The scope of this paper was restricted to the male sex. Women have become so accustomed to removal of the ovaries, and these organs are so much less essential to womanhood than the testicles are to manhood, that it might be necessary to substitute imprisonment for life in their case."

The Medical Guild of Misericordia.—

An announcement received from this Guild states that it is a society of medical men, practitioners, and medical students, established to feed the hungry, to give drink to the thirsty, to clothe the naked, to rescue the fallen, to visit the prisoner, to shelter the stranger, to visit the sick, to bury the dead.

Members of the Guild oblige themselves to engage in any or all of the above works whenever occasion offers, and to consider it their especial duty to watch for opportunities of so doing. In a word, the object of the organization is to impress upon and keep before the minds of its members the duty of doing works of mercy, both spiritual and corporal, whenever it is possible. Wherever there is suffering, there is their opportuniny.

There are no ceremonies in connection with the admission of brethren or associates. Suitable references are required from applicants, and, these being satisfactory, their names are added to the roll of members.

The admission fee is one dollar, and the yearly dues one dollar. Contributions to the general relief fund are urgently needed. For further information, address, W. Thornton Parker, M.D., Provost, Beverly, Mass., P. O. Box 1405.

American Medical Association.—

Officers of Sections are requested to take notice that the official programme must be completed by May 15, by which date each Secretary must hand to the publication committee a list of the papers to be read in his Section, arranged in accordance with the days of meeting. Titles sent later than this date cannot be included. Secretaries of Sections will please send their lists of papers to Geo. Duffield, M. D., Chairman Committee on Publication, 25 Washington Avenue, Detroit, Mich.

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The following are the hotels and their rates for delegates to the meeting of the American Medical Association:

Russell House, $3 per day and upward; Hotel Cadillac, $3 per day and upward; Hotel Normandie, $2 and $2.50 per day; Wayne Hotel, $2 and $3.50 per day; Griswold House, $2 per day; Hotel Tacoma, $1.50 per day; Griffin House, $2 per day; Cass Avenue Hotel, $1.50 per day; Hotel Renaud $1.50 per day; Queen Elizabeth Hotel, $1.50 per day; Rice's Hotel, $1.25 per day; Hotel Goodman, $1 per day.

The local Committee on Hotels, etc., will also be glad to furnish members with the addresses of good boarding-houses. For any further information address W. G. Henry, M. D., Chairman Committee on

Hotels, etc., 68 Lafayette Avenue, Detroit, Mich.

New Chairs and Professors at the Jefferson Medical College.—

The Board of Trustees of the Jefferson Medical College, at their meeting, April 7, 1892, instituted a chair of Clinical Gynæcology, with a seat in the faculty, and elected to the new chair Dr. E. E. Montgomery, who has been for a number of years Professor of Gynæcology in the Medico-Chirurgical College. They also established the following clinical professorships, electing Dr. F. X. Dercum, Professor of Nervous Diseases; Dr. E. E. Graham, Professor of Children's Diseases; Dr. H. Augustus Wilson, Professor of Orthopædic Surgery; Dr. H. W. Stelwagon, Professor of Dermatology; and Dr. W. M. L. Coplin, Adjunct Professor of Hygiene.

Public Baths in Boston.—

The Boston Medical and Surgical Journal states that a company, to be known as the Boston Bath-house Company, is soon to be incorporated to establish baths for the poor of Boston, following the steps of the chief European cities and the recently established People's Baths in New York. There is already a small establishment of this kind in Boston, where, during the first year, 3,000 men, women, and children made use of it. It is hoped that after the baths are established they will be self-supporting. About $40,000 are needed for the establishment of the institution.

The Value of a Trademark.—

Diuretin (Knoll) and theobromine sodiosalicylate are chemically the same. There is no patent, so far as we are aware, preventing the manufacture of the latter by any competent chemist. As a matter of fact, a pure preparation is upon the market from the laboratory of a most reliable chemist.

Diuretin is a copyrighted, or trademarked, name. The preparation sold under that name costs $2.50 an ounce. A trustworthy preparation of the same thing, under its legitimate chemical name, costs fifty cents an ounce.—*Philadelphia Medical News.*

The First Spring Poem.—

The weather's gettin' springy,
An' the birds are gettin' singy,
An' the green is kinder peepin' through the trees;
The black crows—they are wranglin',
An' the jaybirds—they are janglin',
An' there's somethin' jes' like violets in the breeze.

Spring's a comin'! In the valley
Fall her footsteps—musically;
An' the whole world goes to smilin' when she nods;
She's a comin' with a hummin',
An' a drummin', an' a strummin'—
Book agents, bill-collectors, lightnin' rods!

—*St. Joseph Medical Herald.*

A Suicide Club.—

A cable dispatch from Bucharest reports that the Roumanian authorities are much stirred up over the discovery of a club formed among the cadets of the Roumanian Military School, at Krajova, the members of which were pledged to commit suicide as soon as their names should be drawn. The cadets belonged to the upper class in Roumania, and the members of this club were all the sons of prominent families.—*New York Medical Record.*

Suggested Remedies for Over-population.—

The London Lancet editorially comments on this subject, the tenor of its views as to the utility of remedies suggested being pessimistic.

It condemns such artifices as the tolerance of illegitimacy, the discouragement of marriage, the artificial process of selection by which the feeble and diseased be deprived of their genital capacity. The Lancet regards emigration as the most appropriate remedy for the relief of districts overburdened with surplus population.

Medical Clubs.—

The idea of establishing clubs for the medical profession for social purposes, not for shop talk, is becoming popular.

The Practitioners' Club, of Chicago, has become an established and popular success, and Baltimore has now a club entitled the Flint Club, devoted to gastronomics and diversion. It has thirty members and holds reunions monthly.

A National Sanitarium for Pulmonary Diseases.—

A resolution has been introduced in the Senate, authorizing the President to appoint a committee of three persons, two of whom shall be physicians, whose duty it shall be to select a site for the establishment of a national sanitarium for the treatment of pulmonary diseases. This sanitarium must be located in one of the Territories of the United States, and upon unoccupied public lands, and the commission is to report within six months after its appointment.

Mississippi Valley Medical Association.—

The Mississippi Valley Medical Association will hold its eighteenth annual session at Cincinnati, Wednesday, Thursday, and Friday, October 12, 13, and 14, 1892. A large attendance and a valuable programme are expected. Chas. A. L. Reed, President, Cincinnati; E. S. McKee, M. D., Secretary, Cincinnati.

Southwestern Kentucky Medical Association.—

The twenty-first annual session of the Southwestern Kentucky Medical Association will be held at Paducah, Ky., Tuesday and Wednesday, May 10 and 11, 1892. President, J. R. Coleman, Murray, Ky.; Vice-President, W. S. Stone, Birmingham, Ky.; Secretary, J. T. Reddick, Paducah, Ky.; Treasurer, C. H. Brothers, Paducah, Ky.

Cremation in Paris.—

One hundred and fifty corpses were cremated in Paris in 1891, as against fifty the year before. The municipal authorities have recently decided that the bodies of those dying in the hospitals, unclaimed by friends, shall also be cremated, so the number of incinerations in 1892 may be expected to be very large.—*New York Medical Record.*

Medical Proverbs.—

A physician is an angel when employed, but a devil when you must pay him.

A disobedient patient makes an unfeeling physician.

What cures Sancho makes Martha sick.

Dear physic always does good.

The earth hides as it takes
The physician's mistakes.

Therapeutic Brevities.

Treatment of Acne.—Dr. Wm. F. Waugh, in the Times and Register, summarizes his views on the treatment of acne as follows:

Correct any derangement of the general health which a thorough examination may disclose.

Regulate the general and personal hygiene.

The vigorous application of soft soap is indicated in all cases except the rare acute form; but especially for infiltration.

Nearly all authors recommend sulphur ointments for ordinary cases; mercurials for severe ones.

Except when clearly indicated, internal remedies are rarely of use.

The disease is singularly obstinate; hence, changes in the treatment adopted after mature reflection should not be made except for cause.

Ergot will cause the indurations to disappear quickly; but they will return when the drug is discontinued.

The prolonged use of strychnine and nitro-muriatic acid sometimes effects a cure.

℞ Strychninæ sulphat., gr. j.
Acidi nitro-muriatici, ℥ iij.
Aquæ dest., q. s. ad ℥ v.
M. Sig.—A teaspoonful in water before each meal.

I have more than once failed to benefit a patient until he abstained from malt liquors.

The Best Way to Give Cod-liver Oil in Tuberculosis.—According to Prof. Charteris, in the London Lancet: It should be prescribed in a teaspoonful dose at bedtime for three successive nights, then a dessertspoonful at the same time. On the sixth and seventh days it should be taken in a dessertspoonful dose after dinner and at bedtime, and afterward in a tablespoonful dose after each meal. If so prescribed it does not cause eructation or nausea, and the doses may be increased in accordance with the wishes of the patient until the end of the fifth week, when it should be stopped for a week, and resumed. With each dose of the oil five grains of hypophosphite of lime dissolved in a little hot water should be taken. Thus administered, these medicines notably increase the strength of the patient, and returning health is evidenced by increased weight.

Rectal Injection of Eucalyptus Oil in Influenza.—J. C. Voigt, M.D., in the London Lancet, reports his experience with this method, giving details of four cases. His conclusions

are: The antiseptic action of rectal injections of eucalyptus oil is efficacious in cutting short an attack of influenza, and in preventing altogether that nervous prostration and general break-down which accompany and follow the disease, provided always that one is called to the case at a sufficiently early stage of the illness, and that there is no contra-indication in the state of the heart or kidneys. For adults, without co-existing heart or kidney disease, a drachm of the pure oil of eucalyptus globulus is mixed with nearly an ounce of warm olive oil. An india-rubber ball syringe is filled with this mixture for each injection. The injections are at first given every two hours. When improvement sets in the dose is reduced to half a drachm of the eucalyptus, and the injections are given less frequently.

A New Treatment for Hiccough.—Dr. Leloir, of Paris, describes a new treatment for hiccough, which he first applied some years ago. He had been called to treat a girl aged twelve, who had suffered for a year from incessant hiccoughing, which occurred about every half minute, interfering greatly with nutrition and sleep. Nearly all the different antispasmodics had been recommended without success. Dr. Leloir then thought of strongly compressing the left phrenic nerve between the two sterno-clavicular attachments of the sterno-mastoid muscle. Digital compression, which was very painful, was used for three minutes, after which the hiccough completely disappeared, and has never recurred. During the last five years he has used this method several times in acute and chronic cases of hiccough, compressing the nerve for a few minutes, with complete success.—*New York Medical Record.*

Eucalyptus as a Disinfectant in Sick-rooms.—Sir Ferd von Müller, of Melbourne, has suggested the use of green eucalyptus branches in sick-rooms, a plan which he considers applicable in all infectious and contagious diseases. It is said to have proved successful with phthisical patients, not only upon antiseptic grounds, but also by reason of the sedative influence of the drug upon the cough. The branches should be renewed every other day.

For the Cough of Acute Bronchitis.—

℞ Apomorphinæ hydrochlorat., gr. j.
Acid. hydrochloric. dil., ♏x.
Syrup, f ℥ iv.
Aquæ menth. pip. f ℥ jss.
M. Sig.—From one-half to one teaspoonful every two hours.

Medical Progress.

Therapeutic Application of Viburnum Prunifolium.—R. L. Payne, Jr., M.D., in an article on Virbunum Prunifolium, its Physiological Action and Therapeutic Application, published in the Philadelphia Medical News, April 2, 1892, thus summarizes his conclusions: From knowledge of the physiologic action of black haw we naturally conclude it is destined to become an approved remedy in all diseases characterized by increased excitability of the motor centres. An especial recommendation for viburnum in these cases is that it paralyzes the motor centres without impairing sensation or consciousness.

In the convulsions of hysteria, whether involuntary or artificially induced, in hystero-epilepsy, in *petit mal*, in the true epileptic seizure, and in various localized spasmodic troubles, we may expect much good from haw in the prevention of recurring paroxysms.

In cases of paralysis agitans the writer has witnessed marked diminution in the tremor, and has added much to the comfort of the patient by the prolonged use of moderate doses of this remedy. In idiopathic dysmenorrhœa (?)—by which term I prefer to designate all painful menstruation unaccompanied by organic lesion or displacement—haw is exceedingly useful. This form of dysmenorrhœa is most frequent in subjects of the hysterical temperament, or in women in whom, either by reason of faulty development or the neglect of hygienic laws, the nervous system has become predominant. Idiopathic dysmenorrhœa is characterized not only by the absence of organic defect, but also by acuteness of pain as well as by irregularity, the suffering being much worse during some periods than in others; the condition is by some teachers designated ovarian, by others spasmodic dysmenorrhœa. In this form of painful menstruation the viburnum will prove of the greatest utility if it be administered for a few days prior to and during the time of the menstrual epoch; and even in painful menstruation due to obstruction, while we could not expect this agent to prove curative, it will certainly lessen the violence and frequency of the colicky, bearing-down pains, and is open to none of the objections that apply to the use of opiates.

In this connection it may not be out of place to refer to the statement of Dr. Edward Jenks, who declares that haw is only useful in those cases of dysmenorrhœa associated with menorrhagia. This statement, in

the writer's opinion, is not absolutely correct, but there certainly are cases of dysmenorrhœa associated with menorrhagia, in which ovarian influences play an potent part as ætiologic factors in the production of the increased and painful flow, that are much benefited by the viburnum.

That there is a form of dysmenorrhœa produced by ovarian influences is beyond question. Ovarian irritation is common at the age of puberty; is frequent in sterile marriages; is often caused by sexual excesses, and is common among prostitutes or when great disparity exists between the ages of husband and wife; and, lastly, like the final flickerings of the candle burned into the socket, ovarian irritation is one of the most constant phenomena of the menopause, and whenever found associated with menorrhagia we can safely regard it as one of the causes of the increased flow, and may confidently expect to do much for its relief by the administration of the viburnum. On the other hand, in menorrhagia due to congestion of the portal circulation, subinvolution of the uterus, metritis, lacerations and erosions of the cervix, and when fibroid tumors exist, haw not only exerts no beneficial effect, but may prove positively injurious.

In the prevention of abortion haw has proved itself pre-eminently useful, and with clear knowledge of its physiologic action it stands upon a firm basis before the profession as the very best agent known for the purpose named. Labor, whether at full term or occurring prematurely, is nothing more or less than a reflex action, and haw, from its power to lower the irritability of the motor centres through all grades of debility, from the slightest paresis to the most profound paralysis, commends itself above all others as the remedy in threatened abortion.

Of course, if the ovum is detached from its uterine connections, in part or entirely, we could not expect, nor would we desire, its retention, but in cases the result of emotional causes, or other causes acting exclusively through a nervous agency, when there are simple expulsive pains without much hæmorrhage, even though there may have already resulted considerable dilatation of the os uteri, the viburnum will almost surely prevent abortion, if it be faithfully pushed. Viburnum has proved of the greatest use in the writer's hands in cases in which women have contracted the habit of aborting. In these cases the fluid extract in drachm doses, or preferably a decoction prepared from the fresh bark of the root, in half-ounce doses, should be administered three or four times daily from the time pregnancy is suspected till several weeks have elapsed after the usual period of aborting. One word of caution is necessary as to the use of haw in threatened abortion. In cases characterized by much hæmorrhage, the vitality of the embryo is probably lost, and it is hardly worth one's while to try and save it, and in these cases haw may prove a dangerous remedy. The bleeding is caused by a detachment of the placenta; the only means of checking the hæmorrhage is the closing of the torn uterine sinuses by the contraction of the uterus, and haw by its paralyzant action may effectually prevent this contraction, and thus add greatly to the danger of death from hæmorrhage. Or, again, haw, by controlling the expulsive efforts of the womb, may cause the retention of a decomposing mass, and thus favor the production of septicæmia. A large number of pregnant women suffer with what the writer is in the habit of styling irritable uterus. At any time during pregnancy, but especially during the later months, the womb may become fretful under its burden, and then occur frequent slight contractions, which annoy the woman and keep up tenderness and a sore feeling in the lower part of the abdomen. These cases are speedily relieved by moderate doses of viburnum. In the false pains that often harass a woman for days before the onset of labor, and in the after-pains of confinement, haw will often relieve.

Cactus Grandiflorus.—R. W. Wilcox, M.D., in the Postgraduate for February, 1892, reports the histories of twenty-three cases of various forms of valvular heart disease by cactus grandiflorus. The average dose of the remedy has been from 15 to 20 minims of the fluid extract three times a day. Wilcox concludes as follows: The drug has no cumulative action, nor is there any acquired susceptibility to its use. About six to twenty-four hours are required before its full physiological effect is observed, excepting in tachycardia secondary to other conditions, when two hours are sufficient for the appearance of its effects. It does not interfere with digestion, nor does it have any effect upon the urinary or respiratory system other than would be expected from its action on the heart.

The conditions in which cactus is especially useful are:

1. Cardiac weakness, when the heart has not acquired compensation for valvular lesion, or, having been compensated, muscular degeneration has taken place, so that now relative incompetency exists. In other words, where a pure cardiac stimulant is re-

quired, cactus is indicated. Such cases are cardiac weakness in convalescence from typhoid fever, when change of position induces syncope; angina pectoris is of purely cardiac origin and of asthenic hearts; simple eccentric cardiac dilatation, such as found in pericarditis from paralysis of the cardiac muscles underlying the area of pericardial inflammation.

2. The functional cardiac diseases resulting from tea, coffee, tobacco, and alcohol, the palpitations of dyspepsia, neurasthenia of the climacteric, exophthalmic goitre, morphinism, sexual exhaustion, and, to a less extent, those of anæmia, are relieved; some of these cases being those of purely functional disturbance, atony of cardiac muscle from deficient innervation, others being true degeneration of cardiac muscle, and thus belonging to the first class. There are the irritable hearts, when palpitation is of emotional origin; these are the cases where cactus makes the pulse regular, because through its action upon the sympathetic the nutrition of the heart is improved.

3. The "slow" hearts, when there is overstimulation of the pneumogastric, or marked degeneration of the muscular wall of the ventricle. These are the hearts formerly so refractory to treatment, the hearts in which digitalis is absolutely contra-indicated.

In all cases the tension of the pulse is increased, but its breadth is unaltered, so that the work of the heart is not made greater by contraction of the arterioles, as is the case in the administration of digitalis. This increase of tension is due to the fact that more blood is propelled through the arteries under the influence of cactus, and the increased arterial tension results in prompt relief of venous congestion. In old rheumatic hearts pain is relieved because this pain is merely a symptom of a heart that is relatively incompetent, and the tonic effect of cactus is to relieve this incompetency; and this is the guide to its administration in valvular lesions. In mitral stenosis, however, it is absolutely contra-indicated; owing to the shortening of the diastole, sufficient blood cannot flow into the ventricle to result in an efficient ventricular systole. In aortic regurgitation, however, it is the drug *par excellence*, because the marked shortening of the diastole regurgitation into the left ventricle is lessened. In other words, in aortic regurgitation cactus is indicated and digitalis absolutely forbidden; in mitral stenosis cactus must be avoided, while digitalis should be administered—the one drug having its use when the other would be harmful. In other lesions the guide for administration lies in the relation which the propelling force bears to the work that it is called upon to do, and success in the administration of cactus means a disappearance of symptoms of cardiac insufficiency.

THE TREATMENT OF APOPLEXY BY POSITION: THE "BOWLES TREATMENT."—Sometimes treatment of the greatest simplicity is overlooked while laboriously but vainly trying to help a patient; and this remark is particularly applicable to one of the most useful of all measures for the relief, and it may be the salvation, of a patient in a severe apoplectic attack. Stertor is one of the danger-threatening phenomena of apoplexy, and it is usually regarded as connected in some more or less mysterious way with hæmorrhage into the brain and conditions of arterial tension. Robert Bowles, in his recent work, "On Stertor, Apoplexy, and the Management of the Apoplectic State," has made some valuable practical suggestions with reference to the nature of stertor and its relief. He criticises the view of Strumpell, Nothnagel, and the authors in general who agree with them, as to the value of venesection, enemata, and purgatives for apoplexy. He believes that, after all, it is the suffocation symptoms which are relieved by bleeding, and suggests what is certainly a much simpler, if equally effective, means of giving relief, namely, turning the patient on his side, The practical value and easy application of his views are at once evident. On several occasions I have tested their value, although I am inclined to believe that he is too sweeping in his claims for the efficacy of his plan in all cases.

The stertor is descriptive of the sounds in the throat, mouth, or any part of the air passages, produced by the movements of the air during respiration, and occurring in apoplectic and like conditions. Bowles distinguishes between several varieties of stertor, as the nasal, the buccal, palatine, pharyngeal, laryngeal, and mucous. He holds that the stertor of the apoplectic state may be equal in danger to the crowing of the croupy child, or the stridor arising from the pressure of a thoracic tumor.

The accident which determines whether the "stroke be or be not accompanied by stertor," he says, "is in most cases due to the patient's happening or not happening to be on his back; or, should he exhibit stertor while on his side, there must be some derangement of the ordinary relations of the pharynx, such as the chin being too near the sternum, the existence of a local œdema, long uvula, large tonsils, mucus in the air-

tubes, pressure from without, or indeed anything which narrows the respiratory channels or vibrates in their course." His most important conclusions are: That the three forms of stertor which have the most connection with the apoplectic state are the palatine, pharyngeal, and mucous; that these three varieties, whatever their remote cause, are the immediate result of a local mechanical condition—a condition which may always and at once be changed, to the great relief of the patient, and sometimes to his permanent recovery, by placing and keeping him on the paralyzed side.—Chas. K. Mills in *Philadelphia Polyclinic*, March, '92.

Treatment of Urticaria and Psoriasis.—H. W. Stelwagon, M.D., in a clinical lecture on Urticaria, Psoriasis, and Sycosis, comments on the treatment of the two former as follows:

The treatment of acute urticaria consists in the removal of the cause, usually stomachic or intestinal disturbance, by the administration of saline laxatives and antacids. A laxative deserving of special mention is the ordinary calcined magnesia, a sufficiently large dose being given to produce free action of the bowels. Or an ordinary saline, such as Epsom or Rochelle salt, or Hunyadi water, may be prescribed, and an antacid, such as sodium salicylate or bicarbonate, administered in 5-grain doses three or four times daily. Emetics are sometimes advised for removing the offending material. Regarding the treatment of psoriasis, Dr. Stelwagon says: In many cases the eruption may be quickly—that is, in the course of several weeks or a few months—removed. Of the few internal remedies useful in the constitutional treatment of this disease, two should be especially referred to. One is arsenic, and the other alkalies.

In the moderately or markedly inflammatory type represented here, arsenic may or may not do good. and, if prescribed, must be used with caution, as the disease when of this type is sometimes made worse by its employment. On the other hand, this is just such a case in which you expect the best results from the administration of alkalies. This man is in good health, strong, robust, of good color, and the eruption is of the actively inflammatory type; and in such patients and in this type of eruption alkalies are especially indicated. The favorite, and upon the whole the most available one, is liquor potassa, administered in dosage of from 5 to 30 minims, largely diluted, three times daily. We shall prescribe that remedy in this case, beginning with 10 drops and rapidly increasing to 20. As to the external treatment, the first essential, as in all cases of psoriasis, is to get rid of the scales. This will be most readily accomplished by means of repeated warm alkaline baths. The patient will be directed to take a daily bath, made up of six to eight ounces of the sodium of potassium carbonate in sufficient water to cover himself when in the recumbent position—about thirty to forty gallons. He should remain in this bath for fifteen to thirty minutes, and the warmer the bath the more effective. After a few baths of this kind the probability is that the patches will be entirely free from any scaliness. Should this not be the case, or should this method prove slow, which exceptionally happens, then the scaly areas are to be washed with sapo viridis and hot water, just before he enters the bath. During treatment, and often as an essential part of it, these baths will have to be repeated from time to time. The external remedy to be advised in this case, which is admirably suited for the class of cases this represents, is chrysarobin. It is best applied as a paint. One to two drachms to the ounce of collodion, to which five minims of castor oil are added, will be found a convenient formula. Or the paint may be made of chrysarobin and a solution of guttapercha. The one selected is painted over the patches, the paint immediately drying into a more or less elastic film. At the end of a day or two, from detachment or from cracking of the film, a repainting will be found necessary, and so on, until applications are no longer needed. Usually, at the end of a week or ten days the application must be intermitted, owing to the tendency to dermatic inflammation of the surrounding skin, to which it gives rise. At such times a mild ointment may be applied. This remedy is not applicable to hairy parts, and, as it is a strong one, must be used with care and judgment. It is a good rule not to use it about the face or scalp. Tar ointment, in officinal strength or weakened, is another valuable application and one of probably more general use than chrysarobin. It is to be well rubbed into the diseased areas once or twice daily. The use of a dusting powder after tarry applications renders their use much less unpleasant. To the face and scalp either the tarry ointment will be applied or an ointment of ammoniated mercury, forty to sixty grains to the ounce.

Jequirity a Perfectly Safe Remedy.—Charles E. Michel, in the Archives of Ophthalmology, Jan., 1892, reports his ex-

perience with jequirity. At one time current literature teemed with articles for and against this remedy. But the majority, because of its apparently irregular action and supposed danger, are inclined to use it seldom and with apprehension, thus allowing it to fall into disuse. In 1884, De Wecker's method of employing it at his clinic was watched. On returning home, a *modus operandi* of my own was adopted, which has proved so satisfactory that there has been no occasion to modify it. It has been employed both in private practice and in public clinics. Very rarely did the reaction cause any anxiety, and no accident has occurred. Only ordinary precautions were taken to exclude glaringly inappropriate cases. The conviction has grown that where accidents have occurred they have been due chiefly, if not entirely, to an overdose of the remedy. Of course there may be danger if grossly misused, or if idiosyncrasy exists.

Have made by the druggist a four-per-cent. maceration of the bean in cold water, allow it to stand twenty-four hours in a cold place, then decant until a semi-milky fluid is obtained. If kept in a cool place the infusion will exert its full effect as long as its first acrid flavor persists—four to six days. After that, decomposition sets in and it becomes unfit for use. There is no hurry needed in cases where jequirity is indicated; they are chronic. To neither patient nor friends can the application of jequirity be entrusted. Shake the bottle; then, lifting the upper eyelid away from the globe, instill a single drop of the infusion, allowing it to flow freely over the globe for thirty seconds, after which the patient must not rub the eyes. The case is seen twenty-four hours later, and in about five per cent. of the cases a characteristic jequirity action is obtained, with indications of commencing formation of the so-called false membrane; generally, however, there is only free lachrymation and a reddened conjunctiva; if this be marked, another similar instillation is made, but if the reaction is deemed insufficient, two drops are instilled and the lids gently rubbed for a few minutes over the globe, and the patient seen again twenty-four hours later. This is generally sufficient. A third application of the same kind is made if somewhat more action is needed, but if only a slight effect has been produced, we feel secure that no intolerance of the remedy exists, and proceed to regular inoculation, which never fails, unless it be in some cases that have been recently subjected to the jequirity treatment. Wrap a piece of cloth about the tip of the forefinger and dip it freely into the infusion; then turn the lids and rub the indolent conjunctival surfaces more or less forcibly so as to remove some of the epithelium. In very chronic cases rub also as much of the globe as can be reached; a few quick brushes of the finger will be borne well enough without cocaine, which may be previously applied.

A NEW URETHROTOME.—R. Innis Bromley, M. D., of Sonora, Cal., in Journal of American Medical Association, April 9, 1892, describes a new urethrotome, the principles of which differ from any of those now in use.

All of the urethrotomes in popular use at the present time are provided with but one blade, and are intended to be used as single "cutters," the incision being made either toward the front or toward the dorsum of the penis, as the inventor thought best that it should be made.

The instrument contains four knives, and cuts the stricture substance at four points at right angles to each other.

It consists of a bulb, which contains the knives, a slender shaft, and the handle. The knives are set at right angles to each other, and emerge from four slots near the end of the bulb. The knives are so arranged that when pressed upon they slide up inclined planes and emerge from the slots spoken of. They are attached to a slender steel rod, which traverses the shaft of the instrument, thence into a piece of metal fitted into the handle, which I shall designate the "plunger." It is here secured by a millet-head screw. This forms the connection between the knives and the knives and the thumb-piece. A spiral spring on the handle presses against the plunger and holds the knives in place when not in use.

The length of the blades may be regulated by revolving a disc, to any desired number under the index. The disc is divided into several numbered spaces, ranging from 16 to 40, French measure.

To facilitate cleaning the instrument, the bulb is divided into two parts, viz., the cap and the base, the division being just in front of the slots. These two parts are fitted together by means of a thread-screw.

In cleaning the instrument, project the knives, relieve the rod by making several turns on the screw at the handle, unscrew the cap from the base of the bulb, withdraw the knives and cap together, and finally remove the cap from the knives. The whole manœuvre takes but little time.

Altogether, the instrument is very simple. It can be operated with one hand, readily cleaned, and the length of the knives may be

known when they are out of sight in the urethra.

It will be seen by the arrangement of the knives that a stellate incision is made in the structure, thus thoroughly relaxing the tissues.

ACUTE RHEUMATISM.—

℞ Euonymin, gr. ¼.
Podophyllin, gr. ⅛.
Aloin, gr. ⅛.
M. Ft. pil. no. 1. Sig.—Give night and morning as necessary.

Give alkalies till saliva is alkaline. Following is a useful combination:

℞ Lithii benzoatis, ʒ ss.
Sod. brom., Potas. carb., āā ʒ ij.
Potas. acet., ʒ jss.
Sodii phos., ʒ ss.
Syr. zingib., Aq. menth. pip., āā ad ʒ vj.
M. Sig.—ʒ ij to ʒ ss in water, four to six hours after meals.

For antipyretics use antipyrin gr. x and digitalis gr. j, combined. For analgesics use phenacetin or antipyrin, and, if necessary, a combination of morphine, bromide, and chloral. Give alkaline mineral waters copiously. Give tonics, the following being excellent:

℞ Tr. ferri chlor., ʒ iv.
Tr. nuc. vom., Ac. phos. dil., āā ʒ ij.
Syr. aurantii cort., ʒ j.
Elix. calisaya, q. s. ʒ ij.
M. Sig.—ʒ j in water t. i. d. before meals.

If heart weakens, use following:

℞ Spts. ammon. aromat., ʒ iij.
Ammon. carb., ʒ j.
Tr. cardomom, ʒ j.
Tr. nuc. vom., ʒ iij.
M. Sig.—ʒ j t. i. d.

For topical application use:

℞ Tr. aconit. rad., Tr. arnica, āā ʒ ss.
Chloroform, ʒ j.
Tr. saponis camph., ʒ ij.
M. Sig.—Apply locally.

Exclude nitrogenous foods. Salicylates, baths, and massage are of doubtful value.—F. Le Roy Satterlee, M.D.

TREATMENT OF CHRONIC SPRAINS OF THE FINGER JOINTS. — Dr. R. W. Lovett, in the Boston Medical and Surgical Journal, states: The treatment, which after much experimentation has seemed to be the best, is complete immobilization of the affected joint for a period of two to four weeks, followed by gradual discontinuance of the splint and the use of massage and hot water.

In general the tin finger-splint has been used and the affected joint painted with iodine during the time of its immobility. In private practice it has been more comfortable to apply the copper-wire splint, which is done by winding the finger in sheet wadding and then winding a spiral of thin copper wire about it, with one or two lengths running from the tip to the base of the finger. This gives complete and comfortable immobility, but requires constant adjustment and is liable to interfere with the circulation. After the finger has been immobilized for such time as seems best according to the severity of the case, the use of hot-water soaking is begun, along with massage every second day. Gradually the splint is discontinued without much regard to the pain caused, and the patient encouraged to use the finger.

Two points have appeared to the writer to be established: One is that simple flexion, however prolonged, is not enough to cure the affection, and, secondly, experience in the more severe cases has shown that the immediate use of massage is not tolerated. Consequently a period of immobilization must be insisted upon which at the time seems to be accomplishing very little, but which probably is an essential part of the treatment. And at the close of this period of fixation there is often but little improvement noted, and pain on movement seems perhaps as severe as in the first place. But this must be disregarded and massage begun.

Salicylate of soda three times a day, or oftener, in ten-grain doses, has formed part of the writer's treatment, because in some cases there was evidently a rheumatic element, and because in the majority of cases it was found to control the pain and seemed to hasten the convalescence. The general condition often needs attention.

INCESSANT HICCOUGH RELIEVED BY LAVAGE OF THE STOMACH. — Dr. Everett J. Brown writes, in the Medical Record, as follows:

Reading in the daily press lately several accounts of a most persistent case of hiccough which had lasted many days and which was baffling the skill of the local medical fraternity, recalls to my mind a case of the same trouble which came under my care while a resident physician in Cook County Hospital, Chicago, of which case I find I have complete notes.

S. S., a Russian peddler, aged twenty-seven, admitted to hospital April 30, 1888. Had always been in good health; on admission complained only of a persistent and incessant hiccough, which continued night and day; it had already lasted one week; he was thoroughly exhausted from loss of sleep and the pain and soreness produced by the constant contractions of the diaphragm; the usual remedies for these cases, such as morphine, bromide and chloral, ether, cannabis indica, bismuth, soda, and atropine, were each tried, but with little or no effect; morphine in large doses would relieve for one or two hours and allow the patient some sleep; electricity applied to the epigastrium and to the phrenic nerve was of no avail.

On examination over the region of the stomach that organ was found to be considerably dilated and to contain a large quantity of fluid; there were no external signs of a tumor or other pyloric obstruction; thinking that the dilatation of the stomach and the retention of fermenting food might be a cause of the hiccough, I introduced a siphon-tube into the stomach and thoroughly washed out that organ; at least two quarts more of fluid were removed than had been introduced through the tube, and that which was removed was in a high state of fermentation. After this operation the hiccough entirely ceased and the patient had his first good night's sleep in sixteen days. He was discharged two days later with no return of the trouble.

Menstrual Madness.—In a paper on this subject appearing in the Jour. de Méd. et de Chir. Prat., it is stated:

It is notable that at the time of menstruation most women suffer from unusual phenomena, implicating generally the nervous system. The most common symptom is migraine, which may be regarded as the beginning of a slight cerebral excitation. A change in the ordinary disposition is frequently seen, the person becomes quarrelsome, contradictory, and unsatisfied; an abnormal jealousy may also be observed. Cases of dipsomania, kleptomania, etc., have been observed at this period, and erotomania is not uncommon; in one case a woman in a high state of genital excitement wanted to be taken to a house of prostitution.

The gravest form of the complaint is that of homicidal mania, of which some cases have been known to exist; much more frequently, however, the delirium is generalized; it is a true madness which nearly always manifests itself during the flow of the blood. All the symptoms cease with the catamenia or a short time after, but cases have been known which degenerated into chronic mania. Again, melancholia is observed; this last form is particularly noticeable in young girls at the time of their first periods.

The prognosis in menstrual madness is relatively favorable, but full account must be taken of the predisposition. If that be favorable the cure is more easily obtained than with many other forms of mania. Leeches and vesicatories may be of some use, but the chief reliance must be placed in the bromide of potassium, a medicament essentially genital. If the manifestations of the disease be very marked, it is well not to forget that, by the side of opium, morphine, and atropine, the tartar emetic in small doses is very efficacious and is much employed in England, especially to calm excitements of this kind.

Radical Cure of Reducible Hernia by Injection of Alcohol.—Hink reports (Wien. med. Blätter, No. 48, 1891) fourteen cases of reducible inguinal hernia under the care of Professor Weinlechner, which were treated by repeated injections of alcohol. This method was first proposed by Schwalbe, who found that alcohol when injected into the soft parts causes chronic inflammation, and the consequent formation of indurated deposits, which in the course of time gradually disappear. By frequently repeated injections of absolute alcohol and distilled water, the proportion of the former increasing with the duration of the treatment from 20 to 70 per cent., inflammatory action is set up around the neck of sac, which is followed by adhesions and retraction of the soft parts. In this way, it is stated, the conditions of a radical cure of hernia are fulfilled; the neck of the sac is fixed by adhesions to the inner margins of the inguinal openings, and the peritoneum is so firmly attached to the surrounding structures as to be incapable of further extension. The injections have in many instance to be repeated very frequently. In one case the patient was under treatment for nearly seven months, during which period 109 injections were made. The results in all but two of the cases are stated to have been very satisfactory, but in one case only was any observation made after the patient had left the hospital. In one case an injection was followed by alarming symptoms of syncope; and in other cases inflammation of the tunica vaginalis, epididymitis, and suppuration were observed.

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Original Articles.

CLINICAL STUDY OF SYRUP OF HYDRIODIC ACID.

BY E. Q. THORNTON, M.D.*

Every physician, doubtless, has at one time or another met with difficulty in the administration of iodine and alkaline iodides, probably having even been compelled to discontinue these valuable therapeutic agents on account of nauseating taste and tendency to provoke gastric and intestinal disturbances. These disadvantages are even more to be condemned than the nauseous taste, and apply especially to iodides of potassium, sodium, and ammonium. The following clinical study was undertaken, with the result I now can speak confidently of the superiority of the Syrup of Hydriodic Acid over all other iodides, possessing none of their disadvantages, while retaining their full therapeutic value. The disgusting taste of potassium iodide (the salt in most common use) is proverbial, it being almost an impossibility to administer it to children, especially for long periods of time. When we consider that the salts of iodine are alkaline, and that in contact with acid gastric juice must render it less acid, or even neutral (according to the dose and length of time it is given), the rationale of gastric and intestinal disturbances induced is apparent: The iodine is in combination with a powerful alkali that serves as a carrier. In Syrup of Hydriodic Acid, the hydrogen acts as the carrier, and, being non-irritant, readily assimilable, and acid in reaction, does not interfere with digestion, but rather tends to its furtherance. We come to the crucial test when we ask if the Syrup of Hydriodic Acid is equal to potassium iodide as a remedial agent. My studies bear me out in stating that, while fulfilling all the therapeutical indications for it, it is superior to potassium iodide, since it does not give rise to the digestive disturbances; further, it is pleasant to take, resembling syrup of orange and lemon—two conditions by far too often not taken into consideration, and that represent a triumph in elegant pharmacy.

Our knowledge of the action of iodides is still somewhat chaotic, as well as the causes of diseases in which they have been proved of most value, namely, syphilis, rheumatism, and gout. In chronic lead-poisoning we understand the iodide secures the elimination by deposition of the lead as an insoluble compound in the tissues—by forming a soluble iodide whereby its removal from the system is facilitated. The following are some of the hypotheses advanced as to the action of iodides:

(*a*) Being considered due to an animal alkaloid (leucomaïne?) circulating in the blood, syphilis is benefited by the alkaloid being decomposed, as iodides are known to decompose the vegetable alkaloids. If this hypothesis is true, iodides would be equally indicated in tetanus, snake-bites, and the sting of poisonous insects, as all are supposed to be due to leucomaïnes. (*b*) Syphilitic condylomata are removed by the stimulating effect of iodides upon the tumor, causing absorption. Double decomposition is supposed to take place between the iodide and the inorganic substance of the growth, forming soluble iodides that may be eliminated by the kidneys. (*c*) In rheumatism, soluble iodides are held to be formed by direct contact with insoluble lithiates deposited around the joints. (*d*) In gout, by coming in contact with insoluble urates, inducing double decomposition, whereby the deposits are removed.

The following cases treated are evidence as to the value of Syr. Hydriodic Acid:

CASE 1: *Spinal Syphilis.*—Mrs. P.; age 45. Applied for treatment February 18, 1892.

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History as follows: Four children, oldest 22, youngest 7 years old, all healthy except youngest, a girl, who is poorly nourished and small for her age. Health poor since birth of last child. Special symptoms complained of were: Severe pain in dorsal and lumbar regions, gradually increasing in severity for three months past, worse at night; almost constant headache in occipital region and over top of head; heaviness of limbs and tingling of feet. Denies initial lesion, although her husband, now under treatment, admits chancre and other specific lesions for which he was treated three years before the birth of the youngest child. Ordered teaspoonful doses of Syrup of Hydriodic Acid, P., D. & Co.'s, three times daily, which was gradually increased to tablespoonful. At the expiration of two weeks she exhibited considerable improvement, and at the termination of four weeks had scarcely any pain whatever. At present there is no pain; sleeps well; appetite and digestion good; general health much improved; the medicine has been reduced to two teaspoonsful three times daily. At no time has digestion been interfered with, or objection to the medicine made.

CASE 2: *Tertiary Syphilis.*—W. B., laborer; Feb. 20th, 1892. Contracted syphilis ten years ago; was under treatment for ten or twelve months, and apparently well; discontinued medicine. Previous to contracting syphilis his wife had given birth to three boys, the oldest now 22, the youngest 12 years old, all healthy. Three years after contracting disease his wife gave birth to a girl (Case 3), the child never having been healthy, nor has his wife ever been as well since the birth of this child as before. About four years ago two ulcers developed upon his left leg, one below the knee on the fleshy part of calf externally, about the size of a silver half-dollar; the other was on inner side of the thigh. Under treatment both healed, leaving the scars to tell the story. He applied for treatment at this time on account of severe pain in the lumbar region. With this history I at once placed him upon full doses of Syr. Hydriodic Acid, when, after two weeks' treatment, the pain entirely disappeared. Since Feb. 20th he has been taking tablespoonful doses of the syrup three times daily. No digestive disturbances and no symptoms of iodism were manifested at any time.

CASE 3: *Specific Dactylitis.*—I. P., age 7; March 3d, 1892. Applied for treatment on account of three fingers of left hand inflamed at their extremities and ulcerated at base and around nails. Is poorly nourished, small for her age; Hutchinson's teeth; no flattening of nose. Three brothers older; mother at present under treatment (Case 1); father gives a clear history of syphilis (Case 2).

Syr. Hydriodic Acid, P., D. & Co.'s, ordered, one teaspoonful one hour after meals in water; likewise mercurial inunctions of inner side of thighs, in axilla, and over abdomen; fingers were dressed antiseptically. This treatment was continued throughout the history of the case.

March 7th.—Little improvement, consequently Syr. Hydriodic Acid was increased to two teaspoonfuls three times daily.

March 12th.—Considerable improvement.

March 19th.—Ulceration around base of nails healed and epidermis peeled off. Mercurial inunctions discontinued.

March 26th the Syr. of Hydriodic Acid was reduced to one teaspoonful three times daily. She is still under treatment, and does not object in the least to the medicine, which has given rise to no digestive disorders.

CASE 4: *Tertiary Syphilis.*—Eliza J., age 40; colored. This woman, who contracted syphilis four years ago, has been very careless in pursuing treatment, discontinuing as soon as the symptoms for which she had sought relief disappeared. When first seen, March 2d, 1892, she was confined to bed and complained of severe pain in back and head. Nodules from the size of a pea to that of a chestnut appeared around wrist and elbows, and just below the knee of left leg, these being probably enlargements of irregular chains of glands; decided glandular enlargement elsewhere was also apparent. Head almost bald from loss of hair; scars on arms, legs, and back from ulcerations. She was ordered the following: Hydrarg bin-iodidi, grain ss; syr. acidi hydriodici f ℥ viii; M. Sig.: ℥ ss three times daily after meals, in water.

March 6th the iodide of mercury was increased to $\frac{1}{12}$ grain three times daily, with

one teaspoonful of Syrup Hydriodic Acid. March 14th mild symptoms of mercurialism were manifested, when the dose of biniodide was reduced to $\frac{1}{30}$ grain, and a hypodermatic injection of ¼ grain pilocarpine given. The case had improved rapidly. At this writing, April 10th, the glandular enlargement and other manifestations of syphilis have entirely disappeared; she is free from pain, and is able to follow her vocation, that of a servant

CASE 5: *Syphilis.*—M. S.; age 24. Applied for treatment March 6th, with clear specific history of two years' duration; mercurial breath, having taken protiodide constantly for twenty-four months. Of highly nervous condition, she complains in most emphatic manner of severe bursting headache. Anodynes were given for immediate relief of pain; likewise she was put under full doses (f ʒ iv) of Syr. of Hydriodic Acid three times daily. Two days later she was feeling much better. Since then I have not seen her, as she was probably relieved and, as is most common under such circumstances, disappeared from observation.

CASE 6: *Sub-acute Rheumatism.*—Laura N.; age 35; colored. An attack of acute articular rheumatism, eighteen years ago, confined her to bed for six weeks. Since this attack her joints have been somewhat stiff and painful in damp weather. In December, 1891, she had a severe attack of rheumatism, confining her to bed for seven weeks. She came under my observation Feb. 20th, 1892, when all larger joints were found enlarged and stiffened, and freedom from pain was attained only when the limbs were perfectly quiet. She was placed upon Syr. Hydriodic Acid, two teaspoonsful three times a day, gradually increased to a tablespoonful. No improvement was noticed for three weeks, but since then she has improved rapidly, at the present moment being free from suffering and evincing general good health.

CASE 7: *Lumbago.*—F. A.; male, age 43; agent. After exposure, a severe attack of lumbago resulted, necessitating confinement to bed. Ordered Syr. Hydriodic Acid, tablespoonful every three hours; hot application to painful region. Recovery in three days.

CASE 8: *Lumbago.*—Mrs. L.; age 52; housekeeper. Applied for treatment February 21, 1892. History of occasional attacks of lumbago lasting usually six to ten days; muscular exertion gave rise to great pain in lumbar region. Ordered hot applications to lumbar region and: Vini colchici radi., f ʒ ii; syr. acidi hydriodici (P., D. & Co.'s), f ʒ vi. Sig.: Tablespoonful three times daily in water two hours after meals. Hot application to lumbar region. Patient returned to her duties fifth day after commencing treatment.

CASE 9: *Acute Articular Rheumatism.*—John S.; colored; age 27; driver. I first saw him March 6, 1892, on the second day of an attack of acute articular rheumatism. The joints were dressed with icthyol ointment, and tablespoonful doses of Syr. Hydriodic Acid ordered three times daily. March 13, there being no improvement, the patient in fact being worse, the syrup was discontinued. Sodium salicylate in full doses being substituted, improvement was noticed on second day. Recovery in four weeks.

CASE 10: *Rheumatoid Arthritis.*—M. F.; age 35; housekeeper. This maiden lady I treated for more than a year without benefit; she comes from a family in which there are many sufferers from rheumatoid arthritis. She dates the beginning of her trouble from a Turkish bath taken four years ago, which she considers solely responsible; fingers, wrists, ankles, and toes much deformed. In June, 1891, she came to me much distressed on account of the decided enlargement of ring finger at second joint; she expected an offer of marriage from a widower acquaintance, and in case he did propose she feared it would be impossible to place the engagement ring on her finger. As there was considerable fluctuation around the joint, I decided to puncture to allow supposed fluid to escape. Opening the joint upon one side, not one drop of fluid escaped, but from the irritation and tight bandaging, in four weeks she was enabled to easily slip on a ring she had previously worn. The joint remained reduced in size until January, 1892, when it again became enlarged. As I had tried all remedies commonly recommended for this affection, I decided to make trial of Syr. Hydriodic Acid. She took it for six weeks without beneficial results, and on account of

symptoms of iodism the remedy was discontinued.

CASE II: *Chronic Lead Poisoning.*—The patient, a girl of twenty, works in a dye house, her duty being to handle large quantities of damp, freshly-dyed cloths. The following symptoms were present: Blue line around gums; lateral nystagmus; tremors of hands; pain in abdomen. Full doses of opium were given to quiet pain, and tablespoonful doses of Syr. Hydriodic Acid three times daily; Rochelle salt to move bowels, instead of magnesia sulphate, as I did not wish the insoluble sulphate of lead to form. The opium was discontinued altogether three days after beginning treatment, at which time there were distinct traces of lead in the urine. The blue line grew steadily fainter, though it may still be seen; the nystagmus and tremors remain, for which the patient will be treated when the iodine is discontinued.

In this case the Syr. Hydriodic Acid proved of equal value to potassium iodide in securing the elimination of the poison.

The preparation used by me in all cases was Syrup Hydriodic Acid, double strength, as manufactured by Parke, Davis & Co. My reasons for preferring this preparation are briefly as follows:

1. The strength of this preparation, which represents 2 per cent. of HI, or 11.84 grains to the ounce, that of the U. S. P. being only 1 per cent., or 5.92 grains to the ounce; it will readily be seen that one teaspoonful of this syrup is equal to two teaspoonfuls of the official preparation.

2. The taste of this preparation is more agreeable.

3. The syrup is much more stable than the official preparation; the latter soon undergoes change, whereby free iodine is eliminated and the preparation rendered harmful.

This syrup is very stable; a bottle thereof has been upon my office desk, where the temperature is about 70° F., for two months, without undergoing the slightest change.

In none of the cases treated by the Syr. Hydriodic Acid have there been any digestive disturbances, and no complaint against taking it.

The acid is absorbed readily, and iodine compounds can be detected in the urine ten minutes after taking. It is eliminated by all the secretions, chiefly the urine as iodides and iodates.

Philadelphia, Pa.

SUGGESTION IN THERAPEUTICS.*

BY DR. DUJARDIN-BEAUMETZ.†

I have long hesitated to enter upon the theme which forms the subject of this lecture, but, impelled by your solicitations, I purpose to-day to give you a résumé of this burning question of suggestion in therapeutics.

This question suggests scientific, psychological, and even religious problems so arduous—in so many places it touches upon the marvelous—that it is indeed difficult to take position upon solid and truly scientific ground, equally removed from scepticism and unreflecting credulity.

The marvelous and the mystical have always exerted a dominating influence upon man, and when Quatrefages attributed to the human species the quality of religiosity as characteristic, he indicated well this belief in the supernatural which controls the thought of man, whatever be his race or his habitat.

An interesting and, indeed, very voluminous work might be written on the history of the marvelous in science, and particularly in medicine. Without dwelling here upon all the phases through which this question of suggestion has passed, I may say that amongst all peoples, at its beginning, medicine has been only suggestive. In India, the cradle of our Indo-European races, we see suggestion as the basis, not only of religion, but also of the primitive therapy of this people. Those sanguinary festivals, in which we see the Hindoo crushed by the wheels of the car of the god whom he venerates, those worshipers of Brahma who balance themselves in the air with the aid of cords piercing their muscular tissue—all these tortures belong to the group of suggestion.

Even in that land, suggestion has rehabilitated one character in particular, which

* Translated by Joseph Helfman from the Bulletin général de Thérapeutique.

† Member of the Academy of Medicine; Physician of the Cochin Hospital.

forms quite a special branch of the suggestive state, viz.: Spiritism, to which Gibier has applied the name of Occidental Fakirism, to indicate its origin in the practices of the initiated of the sacerdotal caste — the "yoguyst" and the fakirs. The fakir in truth is a charmer; that is, a practicer of suggestion, and, as has been remarked by Jacolliot, he develops in the individuals surrounding him phenomena of magnetism and somnambulism.

This spiritism, to which I shall not further allude, has devotees as fervent as those who recommend suggestion and fascination, and we have seen one of the great *savants* of England, to whom we owe the discovery of thallium, strenuously endeavor to demonstrate by scientific experiments the reality of the phenomena of this spiritism.

In Greece, during the primitive periods of history, the priests serving in the temples of Æsculapius simply performed suggestion, and since then suggestion has everywhere played a preponderating rôle in the history of medicine. Between the sorcerer still practicing in our villages and the one encountered at the center of the African Continent there is no difference, and, on comparing their performances, we perceive the absolute identity.

But we will dismiss this prehistoric part of the question. Let us abandon the thaumaturgists, the demoniacs, the rosicrucians, in a word, all these miracle-venders and arts of sorcery which occupy so large a place in the history of the Middle Ages and of the Renaissance, and let us come to a period in which these practices begin to assume a scientific tendency.

I say *tendency*, for we must not forget that the suggestive processes are absolutely the same, the suggestioner always imposing his will, be it by touch, by word, or by glance, and if I were to read you passages from Van Helmont, Paracelsus, and Robert Fludd, you would note that they operated in a fashion similar to that of Charcot, Luys, Bernheim, etc. You would even see therein that Helimotius practiced treatment by transplantation, and that he transmitted the malady of a man to an animal, or even to a tree, just as to-day at the Charité the transfer is made of a disease from a suffering to a healthy subject. It was then eagerly sought to leave the domain of the supernatural and demoniac, in order to discover for phenomena a scientific explanation.*

In the sixteenth century we observe the first appearance of this tentative process. This was begun by Paracelsus, who admits that in man there is a special animating or magnetic principle, to which he gives the name of magnetism. During a long period this magnetism was called upon to explain all observed phenomena, and from Paracelsus, down through Van Helmont, Mesmer and his celebrated tub, as far as Baron du Potet and Durville, his actual successor, we see this doctrine of magnetism professed, and uniting a large number of professors and believers.†

But a physician of Manchester, James Braid, modified this opinion of magnetism by showing nearly 50 years ago, in 1842, that by the fixation of brilliant objects it was possible to provoke an *ensemble* of phenomena to which the name of *hypnotism* or *braidism* has been given.‡ The facts reported by Braid remained long unaccepted, despite the reports published from 1859 to 1865 by surgeons who had employed this method to obtain anæsthesia. For a discussion of this question of hypnotism, and the phenomena which it provokes, we must come down to the communications of Lasègue in 1865, of Charles Richet in 1875, to the labors of Charcot in 1869, and, finally, to the communications of Dumontpallier from 1881 to 1884.§

Charcot, in his communication of February

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*Cullerre: Magnétisme et Hypnotisme; Paris, 1886.

† Durville: Lois physiques du Magnétisme; Polarité humaine. Raoux: Zoöthérapie, ou Traitement de l'Homme malade par le Magnétisme des Animaux.

‡ James Braid: Neurypnology, or the Rationale of Nervous Sleep Considered in Relation with Animal Magnetism; London, 1843. Traité du Sommeil nerveux, ou Hypnotisme, translated by Dr. Jules Simon; Paris, 1883.

§ Lasègue: Études médicales, t. i., p. 899; Paris, 1884. Ch. Richet: Journal d'Anatomie et de Physiologie; 1875. Archives de Physiologie; 1880. Revue philosophique; 1880 and 1883. L'Homme et l'Intelligence; 1884. Charcot: Progrès médical, Gazette des Hôpitaux et Gazette Médicale; Paris, 1878. Dumontpallier: Comptes Rendus de la Société de Biologie; 1881, 1882, 1883, and 1884.

13, 1882, to the Academy of Sciences, gave a classification of the divers nervous conditions produced by hypnotism in hysterics, and under the name of "grand hypnotisme" he showed that, with hysterical subjects, the phenomena produced under the influence of hypnosis can be ranged under three types, and that these three classes merge into one another, viz., the cataleptic, the lethargic, and the somnambulic.

Whilst these labors were progressing in the school of La Salpêtrière, the same phenomena were under investigation by the faculty of Nançy, under the direction of Professor Bernheim, one of those who have done the most to solve this question of hypnotism and suggestion.* He had been preceded in this field by a physician, Dr. Liébault, who published in 1886 a study, which then remained unnoticed, under the name: "Provoked Slumber and Analogous States." Liébault maintained that by suggestion it was possible to provoke a particular condition which he called sleep, and *that* in two different degrees, viz., light sleep and profound sleep.

There then arose between these two schools of La Salpêtrière and Nançy a controversy which is far from being settled, and the "grand hypnotisme" of the former is opposed by the "petit hypnotisme" of the latter, Bernheim maintaining that the different phases described by Charcot and his pupils did not exist in reality, and that it was sufficient to awaken in the hypnotized patients the idea of the production of these phenomena, in order to have them appear. In a word, it was only a matter of mere phenomena of suggestion.

Finally, our colleague Luys has recently referred these phenomena to another origin, which is removed from suggestion and approaches more nearly to hypnotization as comprehended by Braid. This is fascination —that which is produced by a brilliant object, such as a revolving mirror, which is moved rapidly before the eyes of persons with whom this mode of procedure is employed.

Whether by hypnotism, by suggestion, or by fascination, a series of phenomena are produced in certain patients which may be summarized under three principal types, of which I shall give you a rapid description.

The first is the cataleptic state. I need not describe catalepsy to you; you know that its essential characteristic is immobility. The glance of the patient is immobile, the eyes are fixed, the visage impassive, and the most peculiar positions may be given to the members and body of the subject, which will be maintained for a long time.

Lethargy, on the contrary, is the opposite of this cataleptic state. It is absolute relaxation of the members; there is complete analgesia; the eyelids are closed, and the patient seized with strabismus upwards and inwards. During this period there is local excitability of the medulla, to which Richet and Charcot have given the name *neuro-muscular hyper-excitability*, on account of which, under the least shock or physical influence—the breath, for example—the contractions of the muscles thus influenced are produced.

Next comes the somnambulic period; this is the suggestive phase of hypnotism. Bernheim and Liébault admit six categories of such hypnotized patients. In all the will of the operator takes the place of that of the subject. In the beginning of this provoked slumber there is somnolence and heaviness, and the power of suggestion is feeble. It is, however, sufficient, for example, to prevent the patient from lifting his eyelids without the permission of the operator. In the first and second stages the patient may be acted upon after the manner of automatic phenomena; subsequently, in the further stages, we arrive at true suggestion, when the patient is related only to the hypnotizer, who makes him execute movements or suggests to him illusions or hallucinations.

I need not enter upon the detail of suggestive experience; you are doubtless familiar with it, and this condition of suggestion may be produced during wakefulness. Such, in a word, are the phenomena developed, be it by suggestion, by fascination, or by hypnotism. The classification which I have made is absolutely theoretical, and these nervous phenomena may vary in form and in course with different subjects, and also in the same subject, whose left side may vary

*Bernheim: De la Suggestion et de ses Applications à la Thérapeutique; Paris, 1886.

from the right in degree and manner of susceptibility.

Before now discussing the value of such procedures, it behooves me to explain how these phenomena may be produced. The means of evoking hypnosis or the hypnotic state are of the most varied character, and their description you will find in Bernheim's work.* First, there are the passes formerly so commended by magnetizers, which you will find described in all the special works, particularly in those of Deleuze, Teste, Noizet, and even by the Hindoo magnetizers. Braid substituted for the passes of the magnetizers fixation of the glance upon an object—something brilliant, or merely the finger of the operator. At the Salpêtrière school, everything is employed which can excite the senses of hearing or sight. The noise of a gong determines the hypnotic state as well as the production of a bright light; in a word, every intense sensorial impression may be utilized.

Very different is the process of hypnosis by suggestion; it is that employed by Liébault, Bernheim, and the school of Nançy. We should remember that this method had already been applied many years ago (in 1814) by the Abbé Faria. He was the first to protest against the idea of a magnetic fluid, and affirmed that the slumber of the hypnotized was produced by suggestion or by will.† He fixed the glance of the subject, and showed the back of the lifted hand; then he advanced several paces and suddenly lowered his hand, ordering the subject to sleep.

The same method is employed by Liébault: "The subject is caused to fix his eyes, and is directed to think of nothing save of sleeping and being cured; we announce to him the initial phenomena of sleep—relaxation of the body, drowsiness, heaviness of the eyelids, insensibility. When we perceive that the eyelids move, grow heavy, that the eyes assume an astonished look, and that the pupil oscillates or dilates, we pronounce the sacramental word: Sleep." And Liébault adds that, if at the end of a minute sleep be not produced, the session is adjourned to another day.*

The procedure of Bernheim is still more simple: "The patient lies down, or is comfortably seated in an arm-chair; I allow him to think several moments while telling him that I am going to transport him readily into a state of sleep—sweet and calm slumber. My hand softly approaches his eyes, and I say: 'Sleep.' Some close their eyes at once and are under the influence; others are affected without closing the eyes, showing a fixed glance and all the phenomena of hypnosis. Others present winking of the lids, the eyes opening and closing alternately. In general I do not long leave them open; if they do not close spontaneously, I keep them closed for some time, and, if I notice any resistance, I add: 'Yield yourself; your lids are heavy, your limbs are relaxing, sleep is coming. Sleep.' Rarely have one or two minutes expired before hypnosis has arrived. Some rest immobile and inert from the outset; others seek to regain themselves, open their eyes, start up every minute. I insist; I keep the lids closed, and I say: 'Continue to sleep.'" †

For my part, in using hypnotism in my service, I have produced sleep by fixation of the regard and occlusion of the eyes. As for awakening the patient, this may be done in a number of ways, the most ordinary being to tell the subject to awake, raising the voice into a tone of command. The same result may be obtained by breathing lightly on the face of the hypnotized.

And now that I have summarized as briefly as possible the phenomena provoked by hypnotism, and the manner of producing it, let us examine the therapeutic value of this agent.

I shall not here discuss that phase of the question touching upon the action of medicaments at a distance upon the subjects of hypnotism or suggestion; that question seems now settled, and no one will venture to maintain this action at a distance since the report which I presented to the Academy

* Bernheim: Hypnotism, Suggestions, Psychotherapy, p. 78; Paris, 1891.

† Faria: De la Cause du Sommeil lucide; Paris, 1819.

* Journal du Magnétisme, p. 120; June, 1891. Le Sommeil provoqué, p. 286; Paris, 1890.

† Bernheim, p. 89.

in 1888 apropos of a communication by Luys on this subject.*

The Commission nominated by the Academy has shown, by a vigorous and scientific examination of the facts, that there was no relation between the phenomena observed and the medicines employed. Here suggestion occupied the foremost position, and it was simply because the operator—whether in the experiments of Bourru or those of Luys—indicated in a loud voice, to the people surrounding the patient, what was going to result from such or such a substance, that the patient experienced symptoms similar to the phenomena which he had just heard described. By simply concealing from the operator, the subject, and the assistants the nature of the substance under test, the nonreality of these effects of medicaments at a distance was established.

I now pass to a much more important question—the results which may be obtained from suggestion in different pathological conditions. In order to judge of the real value of this therapeutic agent, we must of necessity establish distinctions between the various patients who are subjected to this suggestion. In this respect we may establish three large classes, or, if you prefer, three grand categories. In the first we place the hysterics, whatever may be the form of the neurosis; in the second we place the neurasthenics, the ill-balanced, the hypochondriacs, the nervous; finally, the third comprises all those suffering from organic affections with lesions, and in whom the nervous element plays only an absolutely secondary rôle.

Suggestion or hypnosis has always produced its most positive effects in the first group. This group, as you know, is very numerous, for, now that we are better acquainted—thanks to Charcot and the Salpêtrière school—with hysterical manifestations, we find that man himself is often hysterical, and you see these patients frequently enough in our halls. This male hysteria may be encountered, not alone in the well-to-do class, but also among laborers.

And here, whatever the mode employed for producing hypnosis, whether magnetism, hypnotism, suggestion, or fascination, the morbid manifestations are caused to disappear, no matter what their nature may be, and do not forget that these morbid manifestations may assume the form and course of organic disease. Hysteria is the soil on which flourish the most voluntary of pseudo-maladies. To gastric hysteria, so well described by my pupil, Deniau, may be joined pulmonary hysteria, which resembles phthisis in a perplexing degree, and of which my pupil, Tostivint, has cited a large number of observations in his excellent thesis.*

You will readily comprehend that the symptoms of these pseudo-maladies can be caused to vanish in male and female hysterics in the same manner as the paralyses, the contractions, and the other morbid manifestations of neurosis. I know of no better example than that which you recently observed in these halls—a young man of 30 years, who entered my department for the third time. This hysteric presented stomachal and abdominal troubles absolutely simulating internal strangulation, and to such a degree that at Nantes they were ready to give him an artificial anus; but the fear of the operation dispelled all the symptoms. This time he entered the hospital for hæmoptyses, rebellious to all treatment; but, by threatening him with flashes of fire, the pulmonary symptoms disappeared, for with such patients intimidation is a form of suggestion.

In this category is suggestion always successful, and can we cause the disappearance of the painful element, so to speak, at will in such subjects? Here, again, we enter upon a special part of our subject, and I purpose to speak of the possibility of performing painful operations under the influence of suggestive anæsthesia.

It is not for a moment doubtful that, in suggestionable hysterics, sensibility and perception of the external world may be overcome to such a degree as to permit long and painful operations. My colleague and friend, Mesnet, who stands among those who have done the most for this question of hypnosis,

* Luys: Action des Medicaments à Distance (Académie de Médecine, 1887) Dujardin-Beaumetz: Rapport sur la Communication de M. Luys; February, 1888.

* Toştivint: Contribution a l'Étude de l'Hystérie pulmonaire (Thèse de Paris, 1888).

and whose judgment of it is cool and fair, has cited convincing examples of operations performed without pain under the influence of hypnotism. It is the same with accouchement. Mesnet, Auvard, and many others have cited cases of delivery thus occurring without the knowledge of the parturiant. But the action of suggestion on sensibility has a limit, and this limit is fixed by the alteration or non-alteration of the point at which pain is produced, as you will see from the following illustration. This is the case of a woman who has entered my department for the fourth time. Her first entrances were necessitated by contractions of the right lower limb. We placed this woman under the influence of suggestion, but awkwardly enough, for on awakening, instead of a unilateral, she had a bilateral constriction. Then one fine day it all disappeared. She returns to-day with a sciatica, and this sciatica affects the side on which she is absolutely anæsthetic. You may pinch her severely at this point, and she will feel nothing, which does not prevent her experiencing violent pains along her sciatic nerve, and here suggestion has been absolutely unable to overcome the pain.

It would be the same with a neuralgia proceeding from dental caries, or with the severe pains provoked by a uterine cancer, or, again, by an ulcer of the stomach. I differ decidedly from Bernheim, and while approving cordially of the spirit which has animated his labors, and in particular his new studies of hypnotism, I cannot admit that the pain of the round ulcer is amenable to hypnotic treatment. That hysterics experience symptoms similar to those which accompany the *ulcus rotundum* I willingly concede—these are pseudo-ulcers; but when a hysteric has a veritable ulcer, which destroys certain nervous terminations, we have there a lesion against which all the efforts of hypnotism will be impotent.

Let us now examine our second group. It is considerable, comprising the great body of the unemployed, of the neurasthenic, of the disordered, of the hypochondriacal, who constitute a large group of the sick of the city. They consult all the physicians, all the charlatans, and their inconstancy is a sufficient proof of the limited power of suggestion upon them. With such neuropathics the influence of the physician and the assurance with which he prescribes his remedies have more effect than the remedy itself. Here lies the triumph of those parti-colored granules, over which certain physicians make magnetic passes before administering them, and this was the special source of the success of the ancient homœopaths—I say ancient, for to-day homœopathy, at least that which is professed by Jousset and his school, repudiates infinitesimal doses and retains only the doctrine, *Similia similibus;* but they use large doses, just as we do.

Again, there are physicians who change the color of the paper in the apartment or the underclothing of the patient; but here suggestion is often evanescent, and, after experiencing some benefit, the patient resumes his ideas and abandons himself to a new physician without ever discovering one who shall relieve him of the pains which at every moment attack his diseased imagination.

As to the third group, we must recognize that suggestion here occupies only an absolutely secondary rank, and it is limited to the moral influence which the physician may have on the patient. This influence, indeed, belongs to the domain of suggestion, and it may be considerable. How many patients are relieved by the mere view of the physician, by the assurance of an early recovery, by the words of encouragement pronounced by the latter? Has not the countenance of the physician its peculiar influence? I quite approve of the ancient thesis once defended, viz.: "The Influence of the Physician's Gaiety on the State of the Patient."

With respect to suggestion, we can here invoke only the rôle of the medical men. The medicament itself plays a certain part, and every new remedy has a phase of success which belongs to the domain of suggestion. The old, oft-repeated pleasantry: "Take this remedy; it cures in an instant," well indicates this suggestive phase, which in therapeutics has been the source of so many errors.

We must now inquire: What is the number of patients who can thus profit by suggestion? If we may depend upon the figures furnished by Liébault during the year 1880, out of 1,011 persons subjected by him to

suggestion, he found only 27 refractory, and 984 hypnotizable persons may be classified as follows:

Somnolence and heaviness	33
Light sleep	100
Profound sleep	460
Very profound sleep	232
Slight somnambulism	31
Profound somnambulism	131

I confess that here I stand in complete disaccord with the school of Nançy, and I can affirm that nothing similar or approximating the foregoing occurs in our hospitals and in our practice. As I have shown you, the hysterics alone benefit positively from suggestion. Moreover, there exist non-hypnotizable hysterics, or, better, an entire group of affections with lesions in the hysterical, which are in no wise amenable to such a medication, and, however numerous you may suppose the cases of hysteria to be, they not the less constitute the exception, if we comprehend in their entirety all the cases of disease which we have to treat.

In conclusion, we have a final point to examine, viz., whether hypnotism has not its inconveniences. It has been maintained that to provoke hypnosis in subjects predisposed to it is not without danger, and that often, instead of causing a disappearance of the morbid symptoms, the nervosity of the patients has been augmented, thus possibly producing physic troubles of great intensity. I have no personal opinion on the subject. Whilst Bernheim, Liébault, Bérillon, and so many others maintain that therapeutic suggestion has no disadvantages, other physicians affirm its dangers with such emphasis that governments, after consultation with academical societies, have prohibited the practice of hypnotism—in Belgium, for example.

I am, however, prepared to take my stand with the latter, for the most eager partisan of suggestion, Bernheim, admits that "therapeutic suggestion is an art and a science, which requires a long experience and a profound knowledge of medicine and psychology," and in making this profession of faith the Professor at Nançy recognizes that therapeutic hypnotism can only be practiced by an instructed physician. He thus by implication concedes its possible dangers.

Thanks to the more attentive study of the phenomena of hypnotism, we are to-day enabled to establish the basis of a psychotherapy; but this psycho-therapy will never constitute more than an exceptional resource in the practice of our art, if we would limit it to the phenomena of hypnotism properly so-called; for, as I have shown you, from the beginning of medicine to our own day, suggestion, that is, the influence of the physician on his patient, has played, and always will play, a considerable rôle in the result of the medication which he prescribes. This is one instance of the action of the great law of animal life, by virtue of which certain beings have influence over others. But there will always remain that large pathological group comprising maladies in the proper sense of the word—pneumonia, typhoid fever, rheumatism, etc., etc.—against which we shall have to employ special medication, and in which hypnotism can never play any rôle. To suppose for a single instant that it would be possible by mere affirmation to cause the disappearance of the entire train of morbid symptoms is an illusion and, worse, an error.

HYPERTROPHIC RHINITIS.

BY J. P. THORNE, M. D.

The frequency of this disease, the undesirable complications and terminations which result from its neglect, and the success of its proper treatment make the study of the affection of special and practical interest. The term catarrh is commonly applied, not only to this and the other inflammatory diseases, but to nearly all of the affections of the nasal passages. The word catarrh is of Greek origin, meaning "to flow downward," referring to the downward flowing of the nasal discharges. The notion prevalent in olden times was that the secretions came from the cerebral ventricles, and a "cold in the head" was considered a purging of the brain. This idea was held until 1664, when Schneider, in his famous work "De Catarrhis," gave a more accurate description of the anatomy of the nose, and especially described the functions of the membrane which bears his name. During the succeeding century a number of works

on catarrh were produced, but no additional light was thrown on the subject until J. P. Frank gave a full account of the disease in 1794. Various other treatises were afterwards written, but it is only within recent years that a thorough study of the different affections of the nasal passages has been made, and, with the advance of medicine and surgery in other fields, equally rapid strides have been made in this department until the present time, when there is an extensive literature on the subject and efficient means of combating the diseases are at our command. The intelligent physician of to-day, with the results of the observations of such skilled and thoughtful men as Lennox Browne, Mackenzie, Bosworth, Seiler, Cohen, Sajous, and many others, can accomplish much in the treatment of these affections.

A variety of names have been given to the disease under consideration, but the term Hypertrophic Rhinitis is preferable, as it expresses the location and nature of the trouble and is in accord with the medical nomenclature of to-day.

Ætiology.—The vascularity of the nasal mucous membrane and its constant exposure to atmospheric changes render it prone to inflammations. Hypertrophic rhinitis will result from anything which causes a persistent hyperæmia of the mucous membrane of the nose; this increased blood supply gives an increased nutrition, resulting in the structural changes of hypertrophy. A common cause is repeated attacks of acute rhinitis, so a knowledge of the causes of the acute form is of value in the prophylaxis of the disease. A frequent cause is "taking cold" by innumerable means, as sudden atmospheric changes, imperfect clothing, sitting in a draft, exposure while perspiring, etc. Many cases of acute and chronic rhinitis are due to the inhalation of irritating vapors and gases and of dust and powders. A certain number of cases are due to improper hygienic surroundings.

Bosworth regards the most frequent cause to be a deformity of the nasal septum, giving rise to stenosis of the nares, which results in hyperæmia of the mucous membrane, increased nutrition, and consequent hypertrophy. The deformity most often comes from injuries received in infancy, childhood, or youth. Nasal stenosis may be caused, not only by deformities and deflections of the septum, but by anything which causes narrowing of the nasal passages, as deformity of the nasal cartilages and weakness of the dilator muscles. Sometimes constitutional dyscrasiæ, as rheumatism, scrofula, etc., play an important rôle in the causation of this disease.

Pathology.—Bosworth has made a careful study of the morbid anatomy of this disease, and the following from his recent work on nasal diseases gives the best and most concise summary of the subject which has yet been published:

"1. Increase of the covering epithelium without desquamation.

"2. Increase of adenoid layer and its capillaries, with stagnation of blood, together with a new formation of fibrous connective tissue replacing the adenoid layer.

"3. Increase of racemose glands, both in the adenoid and submucous layer.

"4. Hypertrophy of the connective tissue between the enlarged veins in the submucous layer.

"5. In advanced stages of hypertrophic process, an absence of lymph-corpuscles, they having evidently been transformed into a connective tissue."

The hypertrophy may involve the whole mucous membrane of the nose, but is usually confined to the tissue of the turbinated body. Briefly, the hypertrophy is a proliferation of all the elements covering the turbinated bones.

Symptoms.—The secretions of the nose are thicker than in the normal condition, and of a mucous and muco-purulent character. The amount of secretion is increased, and in some cases is excessive; numbers of epithelial cells are in these discharges, rendering them thicker and more opaque. A characteristic is the peculiar nasal tone of the voice, caused by the more or less complete obstruction of the nasal passages. The closure of the air-chambers makes the normal resonance impossible, so that the nasal consonants are not pronounced distinctly, and certain words are spoken in a thick, muffled manner. There is a sense of obstruction, so that the patient is unable to breathe through the nose effectually, and resorts to mouth

breathing; sometimes he is unable to blow his nose. In children the mouth is kept constantly open, and a peculiar, stupid expression of the countenance is developed. In an individual case all or only part of the symptoms may be present.

As the disease advances, pharyngitis and naso-pharyngitis frequently appear. Not only does the inflammation extend by continuity of surface, but the air, being taken in through the mouth, takes up the moisture, leaving the parts dry and irritable; the pharyngeal secretions become thick and tenacious. Sometimes the larynx, trachea, and bronchi become involved. Cough also frequently results from this irritation of the upper air passages. Through inflammation and obstruction of the Eustachian tube the middle ear often becomes affected, and impairment of hearing results. A variety of eye troubles are secondary to this disease.

Hypertrophic rhinitis is a common cause of hay-fever and asthma. Certain reflex phenomena, such as headaches, epilepsy, chorea, and others, have their origin in this nasal disease.

Diagnosis.—The diagnosis is easily made by the symptoms enumerated and a careful rhinoscopic examination. The mucous membrane appears swollen and of a red color, the inferior turbinated body is enlarged, and has a corrugated appearance. The middle turbinated has a smooth surface, and is somewhat redder than the inferior body. Frequently the inferior turbinated body is so enlarged as to approach the septum. Differential diagnosis from nasal polypus or other conditions can be readily made by a careful examination.

Prognosis.—The prognosis is very favorable, as nearly every case can be cured by suitable treatment. The hypertrophy can be reduced, the lumen of the nasal passages restored, and the offensive discharges stopped. The reflex manifestations and other troubles caused by the nasal disease disappear when the hypertrophic rhinitis is cured.

Treatment.—The patient should have the best general hygienic surroundings, and whatever tends to improve the hygienic condition should receive attention. The cause of the affection should be carefully studied and, whenever possible, removed.

When the hypertrophy is slight, antiseptic, alkaline, and astringent applications will cure the disease; but when structural changes have progressed to any extent these milder measures merely palliate the symptoms, and more radical treatment is necessary. The method which has given the most success is the use of the galvano-cautery, a procedure warmly advocated by Lennox Browne, Mackenzie, Seiler, and many other eminent rhinologists. This operation is performed in the following manner: The nose is dilated with a nasal speculum and anæsthetized with cocaine; then a platinum electrode is introduced, and a current turned on sufficient to heat the electrode to a cherry red; this is drawn along the turbinated body from the posterior extremity to the anterior; two or three parallel lines are thus made through the mucous membrane. Several applications in this manner will effectually reduce the hyperæmia, and cause a contraction of the hypertrophied tissue. There are various other methods of treating this disease, but experience has demonstrated beyond question that the most favorable results have been obtained by the use of the galvano-cautery. When some constitutional dyscrasia is a factor in producing the disease, this should receive the proper medical treatment.

The understanding which the physician now has of nasal diseases, and the improved instruments and therapeutics of the present, enable him to treat as successfully these diseases as those of any other part of the body. The failure to cure this class of maladies, which was formerly a reproach to the physician's skill, has now given place to success, and the modern physician can relieve suffering and prevent the ravages and extension of disease in this department of medicine and surgery to the satsfaction of himself and patients.

Amboy, Ill.

ACUTE URÆMIA.

BY DR. F. J. BOWEN.

A case of rather unusual interest came under my observation some time ago. A well-to-do farmer, aged about 56, who had always been of temperate habits, very susceptible even to the effects of tobacco, a

hard worker, and in apparently good health, complained suddenly of felling very ill while in the field at work. Going to the house, he was taken with a chill, intense headache, gastralgia, and nausea.

The family physician was sent for, one of those fine-haired therapeutists who publicly disclaim the general use of morphine, and boast that they "can relieve neuralgia without it." In this case, however, he states that, contrary to his usual practice, he weighed out ¾ of a grain of morphine, dissolved it in ten teaspoonfuls of water, and administered the solution in teaspoonful doses, so that during a time of three or four hours about ½ grain of the morphine was given—certainly not a dangerous amount ordinarily. The patient soon afterwards sank into a stupor, from which it was impossible to arouse him. Then began a series of homœopathic manœuvres, carried to their highest potency, for the relief of morphine poisoning.

The victim was laid upon the floor in a cool room, strong ammonia applied to his nostrils, and the chest vigorously rubbed and slapped. Bells were rung and the medicine man shouted, but to no purpose. He was carried upstairs, and hung out upon a slanting roof by the heels, his chest being at the same time vigorously and effectively denuded of its epidermis. Next he was taken out into the bracing air of the raw, frosty November night, and walked, or rather dragged, between two men, the physician closing up the rear and supplementing the plan by occasional assists with his knee. This was continued until one of the attendants complained of feeling cold, and the party repaired again to the house.

Although this treatment would be considered as rather injurious to a sound man, it failed to verify Hahnemann's "infallible law of cure," by curing the sick man, and word was sent to a regular physician to "come and help get the man out of the effects of an overdose of morphine." Think of one of these immaculate beings giving an overdose of anything but taffy!

Arriving, he found the patient profoundly insensible; face pale, but a bright flush on cheeks; muscles somewhat rigid; pupils dilated, and eyes glassy; respiration nearly up to normal, not shallow, but rather of the character which might be called hissing.

Plan of treatment was now somewhat reversed, although the statement that "the patient had received an overdose of morphine" was of course accepted. A catheter was passed, and about six ounces of urine obtained. Four hours later the bladder was empty. The significance of this, however, did not present itself until at the autopsy. The patient was covered warmly, bled, electricity applied to the chest, and bottles of hot water to the extremities and axillæ. Under this treatment he revived somewhat, but only temporarily, and died in a few hours.

A pain and throbbing complained of in the epigastric region gave hopes that some cause of death other than morphine poisoning, possibly an aneurism, might be found, and an autopsy was held.

The aorta was found intact; the stomach and intestines normal. The left kidney presented a distinctly lobulated appearance. On section, the medullary and some of the cortical portion was found entirely replaced by fat. The remaining cortical portion was of a bright red color, and the capsule separated readily, with portions of the kidney adhering to it. The lobulated condition was probably anomalous, not a result of disease, this condition being natural in infants. We were unable to accurately classify the condition of this kidney, but it was evident that for some time its fellow had performed double work. The right kidney showed a condition of acute inflammation. It may be mentioned here that the patient had regularly at least three daily movements from the bowels—undoubtedly a vicarious action.

The case, I think, is now clear. The weather at the time was cold; the man became chilled, and an active congestion, if not an acute inflammation, of his one acting kidney was the result. His urine was suppressed, as shown by the catheter, which was introduced to prevent reabsorption of any morphine which might have been eliminated by the kidneys. Perhaps his stupor was instituted by the morphine. The doctor undoubtedly thought so at the time. Uræmic coma supervened, and this, not the morphine, was the condition to be treated. The cold

air treatment was the worst he could have had, and only hastened and made more certain the fatal issue.

The points which I wish this paper to emphasize are:

First, the insidious onset of Bright's disease in some cases. Physicians themselves are occasionally its subjects, far gone before they are aware of their condition. This patient had no other idea than that he was a sound man, until his last sickness. The physician, besides having professional charge of the family, had been an intimate associate for several years; and yet he had not the slightest idea as to the cause of his trouble.

Second, this school of doctors is constantly practicing deception in claiming to practice under a "*new* and *safer* system," while continually giving doses equal to any given in regular practice. Since this case, to my knowledge, a patient, who had become dissatisfied with this same doctor's treatment, applied to a regular physician in this county for treatment, and had at the time what was undoubtedly a genuine "calomel sore-mouth."

Third, the importance of a diagnosis. With a correct idea of this man's condition, common sense would have shown the necessity of relieving the system by utilizing the two remaining avenues of elimination — active cathartics, the hot pack, hypodermatics of pilocarpine, infusion of digitalis, cupping, etc., etc. Good authorities recommend the hypodermatic use of morphine and atropine to counteract the effects of the uræmic poison on the nerve centres and to facilitate diaphoresis and diuresis. Others contend that in advanced disease of the kidneys it should be used with caution. Certainly it should not be combined with exposure, as in this case.

LANDMARKS IN GYNÆCOLOGY.

BY FRED. BYRON ROBINSON.

[*Continued.*]

SIGNIFICANCE AND UTILITY.

The significance and utility of menstruation are no doubt connected with fecundation. The process of fecundation requires: (1) Ovulation; (2) tubular transmission; (3) a prepared endometrium. The three processes are completed by menstruation. Menstruation I will consider a process of the tubes and uterus. Now, if ovulation occur at menstruation, the first act is to get the ruptured ovule into the uterus, and this is performed by the tubes, through menstrual changes. The tubes at menstruation become congested, getting redder and redder until, especially, the ampulla of the tube is a dark crimson. The tube then looks almost pathological, and certainly is not far from it. Now the tube begins to perform a kind of vermicular movement, a peristalsis like that of the intestine. Its fimbriated end is drawn over the ovary by the shortening of the ligament called fimbria ovarica. The mouth of the tube is glued to the ovary by a kind of cement. I observed this many times in animals, several times in women. The peristaltic or vermicular movement of the tube is what gives the pain just before and at the monthly. It is tubal colic. It is pre-menstrual pain, and I am quite sure the older doctors called it ovarian. Owing to the congestion of the tube at the monthly, its mucous membrane secretes considerable fluid, which fills the tube. The tube, now full of fluid, acts as a canal to float the egg to the uterus. A dry, contracted tube would have difficulty in transporting an egg. The epithelium of the tube is ciliated, and the cilia create currents toward the uterus by lashing always in one direction. Therefore the ovum floats into the uterus along the tubal canal. The design of congestion of the tube in menstruation is to create a water-way or canal to float the egg into the uterus. If the tube did not congest and become filled with fluid and go through its vermicular motion and peristalsis, the cilia could hardly transport the egg through a dry, contracted, still tube. But the significance and utility of menstruation are probably more to prepare the endometrium to gestate an ovum.

Menstruation renews the endometrium monthly. Every month most of the epithelium of the uterus and mouths of the uterine glands are shed. This stripping off of the uterine epithelium monthly forms a new nest for eggs to incubate in.

The uterus, as Dr. Aveling has put it, nidates and denidates. Dr. Johnstone, of

Cincinnati, and Mr. J. Bland Sutton, of London, have both independently confirmed Dr. Aveling's ideas. Hence, menstruation is to prepare anew the endometrium every month. The woman prepares a new nest every month. This new nest was well named by the great pathologist, Virchow, the "menstrual decidua." Now, sometimes this menstrual decidua gets a false start, and the result is membranous dysmenorrhœa, or a mole. If some exalted physiological process arises, the menstrual decidua may grow too much, and result as a mole or membrane. If pregnancy occurs, the menstrual decidua becomes the decidua of pregnancy. Therefore menstruation has for its purpose tubal transmission of an ovum and the preparation of the endometrium for gestation.

There is no doubt that the menstrual process can go on without bloody discharge, *i. e.*, nidation and denidation of the uterus. The monthly nest is formed without any bloody flow, for many women become pregnant without menstruation. The monthly preparation of a nest in the endometrium explains why a woman is so liable to pregnancy right after menstruation—because the nest is fresh and ready to nourish quickly. It also explains why a woman will get pregnant at any time—because the nest is ready at any time and waiting for an ovum. It is likely that an ovum is not furnished monthly, or woman would be pregnant oftener. Or it may be that an ovum will arrive just when the endometric nest is disintegrated and unfit to nourish it.

The conditions of menstruation are: (1) A normal genital apparatus; (2) a normal nervous system; (3) a normal blood.

It must be remembered that the ovary, tubes, kidney, and part of the vagina arise out of the Wolffian body. Also the parovarian comes from this peculiar fœtal body. It is very significant to know that the kidney and ureter, as well as the genital apparatus, are developed out of the Wolffian body. For it means that the kidney and genital apparatus will have a physiological as well as an anatomical connection, and in menstruation the kidney will take its part. Good observers will note kidney changes in menstruating girls. Again, the parovarian shares in menstruation.

So far as I know, we have no recorded case of a parovarian tumor before puberty. But just as soon as puberty springs to life, parovarian cyst also comes into existence. Menstruation should be a painless affair, but it is not generally so, for there are so many deficient genitals. An ovary may be deficient, a tube may be convoluted, or the woman may have an infantile uterus. She may have a small uterus, but large-sized tube, and then she may suffer terribly from tubal colic. The tubes will attempt by peristalsis or vermicular movements to drive the fluid, holding an ovum, into a deficient uterus, and the pain will be known as premenstrual. The endometrium, which is the all-essential gland of woman, by which she builds her gestating nests, may be defective. The best head and the finest skill will be required to detect deficiency in the genitals.

As a digression, I would mention that since the genitals and kidney develop from the Wolffian body, any operative action on the genitals will affect the kidney, and may cause acute nephritis, because of anatomical and physiological connection. Absence, too, of one-half the genitals will likely be accompanied by absence of the kidney on the same side.

The second condition for menstruation is a normal nervous sympathetic system. The cerebro-spinal axis must be normal also. For the abdominal brain is subordinate to the cranial brain. The abdominal brain, or semilunar ganglia, may be small or large. They may have been starved from fœtal life. For example, we find some adult intestines 30 feet long and others 15 feet long. So some genital apparatuses may be twice the size of others. Now, the size of any abdominal viscera depends on: (1) Normal physiological assimilation of good food; (2) normal blood supply; (3) the size of the nervous system which controls the blood supply.

The third condition of menstruation is normal blood. The blood is a tissue—a fluid tissue—and any deficiency in this universal fluid-nourishing tissue stunts and starves the automatic menstrual ganglia so that they won't work. For a slight thing destroys the delicate rhythm of delicate ganglia influencing delicate organs, so that they will be still forever.

In clinical practice we find three classes of girls which show menstrual derangements. These derangements are very frequent in large cities and in thickly populated districts where poverty reigns. I will present a rough diagram showing the peculiarity of the three classes:

FIRST CLASS.

Premature.
Frequent.
Profuse.
Painless.

Result.	*Cause.*
Congestion. Hæmorrhage. Endometritis. Salpingitis. Ovaritis.	Excessive development or over-activity of genitals.

SECOND CLASS.

Delayed.
Infrequent.
Scanty.
Painful.

Result.	*Cause.*
Dysmenorrhœa. Sterility. Amenorrhœa. Short sexual period.	Insufficient development of genitals.

THIRD CLASS.

The tubercular girl, exhausted from disease.

The first class shows excessive developments of the genital apparatus, with its results of congestion and hæmorrhage. The cause of the trouble in the first class is over-activity or premature development. The abdominal brain feeds the organs too much blood and over-taxes them.

It is likely that the first class would include the notorious chlorotic girl, because the chlorotic girl will often flow prematurely, profusely, frequently, and painlessly. Then, as time grows apace, she loses blood, becomes pale, and gets amenorrhœa. Chlorosis is a distinct disease of girls from 15 to 25 years of age. Curiously enough, chlorotic girls are plump, fat, and good-looking, and, though pale, may have a tint or color to their cheek. Here, no doubt, the abdominal brain is at fault, for the very organs that it supplies are going wrong. The digestive tract and the genital organs, so far as menstruation is concerned, are affected. Ovulation is probably not much disturbed, for such girls often get pregnant. The other organ which is distinctly affected through the only cranial nerve which largely helps to make up the semi-lunar ganglia—the pneumogastric—is the heart. The chlorotic girl complains of the organs which are mainly under the nutritive control of the semi-lunar ganglia, viz., the digestive tract, the tubes and uterus, and the heart. She is always talking of stomach trouble and of palpitation of the heart. She is the girl of palpitation, nausea, constipation, and hæmorrhage. These women are often large and fine-looking.

The second class of menstrual disorders include the girl with insufficiently developed genitals. She has delayed menstruation; it is infrequent, scanty, and painful. The result is dysmenorrhœa, sterility, amenorrhœa, and a short sexual life. Her seed-time and harvest don't last long. Generally the tube or uterus is at fault. The ovary is such an important gland that it is seldom absent. The endometrium is often at fault in the first and second classes. I am much inclined of late years, when a girl has infantile uterus, to let her alone. The treatment of the first class of girls is rest and country air. When a girl flows freely, she should not have iron, as iron is a very active pelvic stimulant, and it simply makes the girl flow worse. Any flow of blood from the genitals is simply a dead loss to the girl, and should be checked by rest, or ergot, or by rising the foot of the bed 18 inches. The essential organ to examine is the endometrium But I protest against examining young girls for trifling causes. One can generally cure this class by treating the endometrium—curetting it, if necessary. The second class are the most troublesome, and the most hopeless. This class suffer much pain. If the second class get pregnant, it often cures them by developing the genital apparatus. If they do not get pregnant, it is often best to let them get quickly over their sexual life. Intra-uterine pessaries are dangerous. Electricity often fails. This is the class on which over-zealous gynæcologists do laparotomy, for, they say, using the woman's words, the pain was unbearable—"she was really out of her head at monthly, for she told me so." A man desirous of an operation uses the exaggerated expressions of the patient to fortify his

position, but under any other circumstances he would say, if the woman's statement did not harmonize with physical facts, that her testimony was no good.

The third class of girls are tubercular. They do not menstruate, for nature is saving the vents of escape. This class may include girls exhausted by disease, as typhoid fever or cancer, or women in prison, depressed by mental anguish. In this country girls menstruate at 14 years. It requires about a year and a half for a girl to become regular. Unmarried women do not menstruate as regularly as married, and even sterile women menstruate more regularly than unmarried. About 70 per cent. of all women are regular in menstruation. A large majority of women who begin their menstrual life with pain are sterile. The average duration of menstruation is 4½ days. The amount should average 6 ounces for a woman 125 lbs. in weight. The more painful the menstruation, the longer it lasts. The close connection between the menstrual processes and the nervous system is shown by the disturbance of the nervous system at the beginning of puberty and at the menopause. The young girl is depressed, and the woman at the menopause chafes and frets. The kind of life led by an individual modifies very much her menstruation; even a change from the country to the city plays a rôle. It depends much on exercise. But the most profound change in menstruation is brought about by leaving an active out-door life and assuming a close student's life.

A curious feature of menstruation is the great influence that getting the feet wet has over it. Often women can date menstrual derangements from simply getting their feet wet. Through the nervous system it seems to produce quickly a deleterious influence on the circulation of the pelvis, and often checks the flow. The treatment of menstrual derangements obviously depends on the cause. The best heads and the finest skill will be required to find the cause of the trouble. Often only by building up the constitution can anything be done. It may lie wholly in malnutrition—the abdominal brain is starved. The fluid tissue called the blood is deficient, and that bathes the semilunar ganglia, which regulates nutrition. The abdominal brain may be too small and weak. It may be imperfect, or it may be too much developed. In the treatment of menstrual disorders too much is often done. Local treatment should be avoided as long as possible.

Amenorrhœa is often best left to nature—at least locally. I often think that more harm than good is done in many cases of dysmenorrhœa by local tinkering and pessary-mongers. I do not include in this the continual use of large hot vaginal douches, which the girl can use herself without being examined. Proper and judicious treatment from a specialist will often accomplish much good. But I am much opposed to the use of pessaries in a girl with dysmenorrhœa, simply because she has an anteverted uterus; and I believe intra-uterine stems have generally done more harm than good. Tubal trouble often follow their use. A good treatment for dysmenorrhœa is forcible dilatation, and, if thought advisable, use the curette and apply pure carbolic acid to the endrometrium. In quite a number of menstrual disorders electricity does well, but it must be used with caution when applied to the endometrium. The glycerin-wool tampon helps a few, but the hot vaginal douche will be found the best all-round remedy. It should be given from a fountain-syringe with three-foot head. The girl should use it morning and evening; she should begin with a pint, and gradually increase it until she takes six to eight quarts at a time. She should lie on her back while taking it, with the hips raised. The water should require from 10 to 25 minutes to flow out. She should begin with warm water, and heat it hotter every day until it is as hot as she can bear. At the end of two weeks she should use a handful of common salt for a gallon of water. In women with slack and flaccid organs a teaspoonful of alum should be used for a gallon. For good effects a three-months trial is required. One can see wonderful changes and contractions in the pelvic organs in that time. Large collections of exudates and solid bands of tissue will disappear like magic. Nervous symptoms will go away, and the pelvic nerves of the abdominal brain have been freed from their pressure and contractions. The uterus and blad-

der work better, the rectum contracts and dilates without interference, and, above all, the pelvic circulation returns to normal, its blood-vessels become tortuous, both veins and arteries. The more crooked and spiral the pelvic veins and arteries, the more normal; the more tortuous and narrow the uterus and ovarian arteries and veins, the more normal is the circulation. Heat (hot water) induces the pelvic blood-vessels to become normal—which is narrow and tortuous. Alum hastens the contraction, while common salt is a very natural stimulant to the mucous membrane, and does not produce a bad reaction. Constipation can be nicely remedied by ordering a tumblerful of water to be drunk every night on going to bed. In this glass of water a little Epsom salts should be placed.

The girl should go to the privy as regularly as a chronometer, daily. A few weeks will regulate the bowels. General causes must be sought before local ones. So general treatment will often be better than local treatment. As a tonic iron stands among the first, if the woman does not flow too much; in that case iron makes the flow worse. The bichloride of mercury in the tincture of the chloride of iron makes a splendid tonic, as mercury attacks universally connective tissue. Nux vomica is probably the best tonic for the digestive tract. The skin holds much of the periphery of the nervous system, and it helps the patient to have it well rubbed three times a week with salt water.

A NEW SURGICAL SAFETY PIN.

Dr. Joseph L. Hancock, in The Practitioner, describes a simple device for holding soft drainage tubes in place. It is a pin, constructed of one piece of nickel-plated steel wire, turned into a circular form once and a half around. A sudden bend is made and the end carried straight across the middle to opposite side where the point rests upon the wire. The other end of the curved wire is turned into a small hook to receive the point, for holding and giving firmness to the springing frame, which is so made as to facilitate the catching and unlocking of the pin. It is simple, easy to keep clean, and secures the drainage tube perfectly in place when the bandage is put on.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

B. W. PALMER, A. M., M. D., Editor.

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DETROIT, MICH., MAY 10, 1892.

Editorial.

THE BACILLUS OF MEASLES.

Dr. Canon and Dr. Pielicke, of Moabit Hospital, Berlin, the former of whom is known to our readers in connection with his demonstration of a specific bacillus of influenza, now report in the Berliner klinische Wochenschrift, of April 18th, that through recent experiments they have been enabled to demonstrate also a specific bacillus of measles.

Their researches on the bacteriology of measles were made at the suggestion of the Director of the Moabit Hospital, Dr. P. Guttmann. They point out that cocci have been found by various investigators in the lungs of patients who have died of pneumonia, complicating measles, and that Babes (in Les Bactéries, published in Paris, 1886) found the same micro-organisms, not only in the lungs, but in the lymphatic glands, the mucus of the nasal fossæ, the conjunctiva secretion, and in the exanthematous patches themselves. He also found cocci in the blood obtained from the papules.

Canon and Pielicke made stained preparations of the blood of fourteen patients suffering from measles, and in all cases they found one and the same bacillus. The preparations were made in the same way as in Canon's researches on influenza, and were stained with an eosin-methylene blue solution.

The size of the bacilli is very variable. Sometimes they are found as long as one-half the diameter of a red blood corpuscle, at others they are quite small and have the appearance of diplococci. They frequently appear singly, but in the majority of cases are arranged in large or small clusters. Their arrangement presents nothing charac-

teristic, except that they show a tendency to lie parallel to each other. The bacilli were found during the whole course of the disease.

Canon and Pielicke conclude by stating that the bacilli found by them in the blood of the patients suffering from measles are essentially different from the micro-organisms hitherto described in connection with that disease. They admit, however, that Babes' "bacilles très courts" may be identical with theirs.

This discovery has naturally attracted considerable attention. The question may be asked if it will result in making possible the taking of efficient steps for the protection of children against this disease. Further observations with reference to this organism will be awaited with interest, and no doubt the discovery of a specific cause for a disease is one step toward its prevention or cure.

THE CONTROL OF COMMUNICABLE DISEASES IN DETROIT.

One of the distinctive differences between modern and ancient medicine is the great advance that has been made in preventing the extension of contagious diseases by the enforcement of proper sanitary laws.

The prevention of disease is the ideal of the doctor of to-day. While much has been achieved in the right direction by establishing Boards of Health and endeavoring to enact and enforce necessary sanitary laws, there remains still a vast amount of work to be done.

Legislative apathy in making suitable appropriations for adequate protection of the public health is responsible to a large degree for the spread of contagious diseases.

Michigan has done more to protect public health than many other states, but has had to contend with inefficient appropriations and lax medical laws in its pursuit of this laudable object.

The recent meeting of the Michigan State Board of Health, in Detroit, to consider the prevalence of diphtheria and scarlet fever in the city, brought out prominently that it is one thing to enact laws to prevent the spread of these diseases, and quite another to carry them out, when no facilities for proper isolation, imperatively essential to the execution of the laws, are afforded.

The conference between the representatives of the Michigan State Board of Health and of the Detroit Profession and Health Officer resulted in the following resolutions:

Resolved, That it is the sense of this meeting that the health department of the City of Detroit should send some of its officials frequently to the infected houses to see that the patients are isolated and the other rules of the board are complied with.

Resolved, That Mayor Pingree, Secretary H. B. Baker, and Dr. S. P. Duffield be constituted a committee to draw up a statement to the Common Council of the urgent necessity for a Contagious Diseases Hospital.

Both were adopted and referred to the Detroit Board of Health to devise some means of making the resolutions effective.

In the course of the discussion, it was shown that there was no provision by the municipal authorities for the support of patients with contagious diseases who should properly be quarantined.

The active agitation of this much-to-be-desired Contagious Diseases Hospital in the daily press can do much to educate public opinion to demand of its Board of Estimates a suitable appropriation.

Let those of the profession, who are able, bring to bear what influence they possess. The accomplishment of such an object will give its promoters an enviable place in the esteem of the people of Detroit.

MEETING OF THE MICHIGAN STATE MEDICAL SOCIETY.

The twenty-seventh annual meeting of the Michigan State Medical Society was held at Flint May 5th and 6th, the President, Dr. G. E. Ranney, of Lansing, presiding. The members in attendance numbered about 250.

The place chosen for the next meeting of the Society was Muskegon.

The officers elected for the ensuing year were: President, Dr. C. J. Lundy; Vice-President, Dr. G. V. Chamberlain; Second Vice-President, Dr. Francis B. Rutherford; Third Vice-President, Dr. Benjamin P. Brodie; General Secretary, Dr. Charles W. Hitchcock; Treasurer, Dr. William G. Henry.

The Judicial Council appointed for the

next three years were: Dr. John L. Elliott, Dr. Henry B. Baker, Dr. Schuyler C. Graves.

The address of welcome was delivered by Mayor Taylor. The address of the President, Dr. G. E. Ranney, was entitled "Death, the Universal Law." Dr. C. B. Nancrede delivered the annual address on surgery, on "The Treatment of Tubercular Joint Disease," and the annual address on medicine, "Work and Pay of Health Officers," by Dr. Henry B. Baker, was read by title, the author not being present.

Among the social festivities may be mentioned a reception tendered the Society at the home of Dr. and Mrs. J. C. Willson, and interesting drives about the city, with visits to the School for the Deaf, the Oak Grove Sanitarium, and other places of note.

There were many excellent papers read before sections on Medicine, Surgery, Midwifery, and Gynæcology, some of which THE MEDICAL AGE will be able to present in its columns in subsequent issues.

DRUG HABITUATION.

In a paper on this topic in the Alienist and Neurologist, April, 1892, Lucius W. Baker, M.D., defines the factors operative in establishing drug abuses.

The facility with which nervous processes repeat themselves constitutes the organic basis of habit. The nerve cells becoming fixed in the direction in which they are constantly exercised.

The three most important factors in the formation of drug habits are: exhaustion, insomnia, and pain. These symptoms are frequently the outcome of an impaired or unstable nervous system and of improper methods of living.

Drugs for the relief of these conditions should be prescribed with care and with due regard to the danger of subsequent habitual use.

The treatment of drug habitnation is unsatisfactory unless all the surroundings of the patient during treatment can be absolutely controlled by the physician in charge. Relapses are quite common.

Book Notices.

TREATISE ON MEDICAL AND SURGICAL GYNÆCOLOGY. By S. Pozzi, M.D., Professeur Agrégé à la Faculté de Médecine, Chirurgien de l'Hôpital Lourcine-Pascal, Paris. Complete in two volumes. Translated from the French edition under the supervision of, and with additions by, Brooks H. Wells, M.D., Lecturer on Gynæcology at the New York Polyclinic, Fellow of the New York Obstetrical Society and the New York Academy of Medicine. Volume II. With 174 wood engravings and 9 full-page plates in color. Royal octavo. Muslin, $6; sheep, $7; half-morocco, $8. Wm. Wood & Co., publishers, New York.

The first volume of this treatise was reviewed in the AGE, February 10, 1892, and the favorable opinion therein expressed is confirmed by an examination of the second volume, which completes the book.

Vol. II comprises 583 pages, and covers a consideration of Inflammation of the Uterine Adnexa; Neoplasms of the Uterine Adnexa and Ligaments; Genital Tuberculosis; Intra- and Extra-Peritoneal Pelvic Hæmatocele; Extra-Uterine Pregnancy; Diseases of the Vagina; Diseases of the Vulva; Malformations of the Genital Organs; Diseases of the Urinary Tract, Rectum, and Pelvis.

The colored plates form an attractive feature of the book. In Vol. II there are several of these, portraying Hæmato-Salpinx Simulating Tubal Pregnancy; Occlusion of Tube at Fimbriated Extremity by Adherent Omentum; Pyo-Salpinx, Pyo-Salpinx and Ovarian Abscess Showing Universal Adhesions; Flap-splitting Operation for Complete Perineal Laceration, Lines of Incision, Introduction of Sutures; Rectocele and Cystocele, Stoltz's Operation for Cystocele, Hegar's Operation for Rectocele; Fibromata Labia Minora; Cystic Tumor of Clitoris; Prolapse of Urethra; True Cystocele; Epithelioma of the Labium Majus, Epithelioma of Vagina; Pseudo-External Bilateral Hermaphrodism.

The work complete is an epitome of the best modern knowledge of the gynæcological art, and is the most elaborate that has appeared.

CONTENTS OF SCRIBNER'S MAGAZINE FOR MAY.

"Unter den Linden." Frontispiece. Drawn by F. Stahl; engraved by H. W. Peckwell.

The Children of the Poor. By Jacob A. Riis. [The second article in the series on "The Poor in Great Cities."] Drawings by V. Pérard and Irving R. Wiles; engraving by Pettit, Kruell, Del'Orme, Andrew, and Chadwick.

The Reflections of a Married Man—Chapters VII–VIII. By Robert Grant. To be concluded in the June number.

Rapid Transit in Cities—I. The Problem. By Thomas Curtis Clarke. [A second article, on the Solution of the Problem, in the June number.] Drawings by Childe Hassam; engraving by Witte.

Mirrored Music. By Charles H. Lüders.

Unter den Linden. By Paul Lindau. [The fifth article in the series on "The Great Streets of the World."] Drawings by F. Stahl; engraving by C. I. Butler, E. Clément, E. H. Del'Orme, and Schussler.

The Wrecker—Chapter XXII. By Robert Louis Stevenson and Lloyd Osbourne. (Begun in August, 1891—to be continued.) With a full-page illustration by W. L. Metcalf.

Sea and Land. By N. S. Shaler. Drawings by Harry Fenn and V. Pérard; engraving by Witte, C. I. Butler, Van Ness, and George Del'Orme.

In Egypt. By Benjamin Paul Blood.

Paris Theatres and Concerts—IV. Theatre-going Habits, The Café Chantant, Symphony Concerts and Criticism. By William F. Apthorp. (Concluding paper.) Drawing by J. Reich; engraving by Kruell.

France Adorée. By Ida M. Tarbell.

Historic Moments: The First News Message by Telegraph. By John W. Kirk.

The Point of View: The Detective in Plagiarism—Mistress and Maid—The Saving Grace—The Player's Mouth.

The New England Magazine for May.

Marie Petravsky, a young Russian lady living in New York City, contributes a fine poem on the famine in Russia, called "The Czar's Banquet."

Reuben Gold Thwaites writes an interesting account of "Village Life in Old England," finely illustrated by Louis A. Holman, who furnishes the frontispiece of the number, "A Picturesque Bit of Old England," finely engraved by M. Lamont Brown.

"On the Track of Columbus," an interesting paper by Horatio J. Perry, is one of the features of the May number.

The first of Herbert M. Sylvester's series of articles, "Ye Romance of Casco Bay," begins in this number. The initial article is illustrated by the author, Charles H. Woodbury, Sears Gallagher, Jo. H. Hatfield, and others.

William Eleroy Curtis contributes a comprehensive article on the "Progress of the South American Republics."

Edwin D. Mead at the Editor's Table writes a strong indictment of eastern provincialism in regard to Chicago and the World's Fair.

Walter Blackburn Harte, in the Magazine, makes a plea for the reading of books.

American Men of Eminence.

The Arlington Chemical Co., Yonkers, New York, have issued a series of brochures, entitled American Men of Eminence, which contain very excellent illustrations of many men of distinction. The first of these was distributed some time ago; the second is just out, and contains the portraits of Dr. Fordyce Barker, Henry W. Longfellow, U. S. Grant, R. E. Lee, James Russell Lowell, Dr. Joseph Leidy, and Cornelius Vanderbilt. They contemplate a third series, comprising John James Audubon, Peter Cooper, George Jones, Dr. Austin Flint, George Bancroft, Prof. Joseph Henry.

Brief biographical notes accompany each portrait. The publishers are to be congratulated on bringing out such an attractive novelty, and physicians will welcome the gathering of this counter-presentment of these distinguished and revered men. We understand the Arlington Co. will mail No. 2 now to all physicians who request it.

A Text-Book of the Practice of Medicine for the Use of Students and Practitioners. By R. C. M. Page, M.D., Professor of General Medicine and Diseases of the Chest in the New York Polyclinic. Pages 568. Wm. Wood & Co., publishers, New York.

The purpose of this book is to give in condensed form a summary of the present knowledge requisite to the intelligent prac-

tice of the medical art. The author, in carrying out this plan, gives most prominence to methods of treatment rather than to ætiology and pathology. It will therefore facilitate clinical instruction, and enable those physicians and students to obtain a practical view of the treatment of disease who do not wish to undertake to wade through the extensive literature which each special branch of medical practice now possesses.

THE WORLD'S COLUMBIAN EXPOSITION.

Send 50 cents to Bond & Co., 576 Rookery, Chicago, and you will receive, post paid, a 400-page advance Guide to the Exposition, with elegant engravings of the grounds and buildings, portraits of its leading spirits, and a map of the City of Chicago; all of the rules governing the Exposition and exhibitors, and all information which can be given out in advance of its opening. Also, other engravings and printed information will be sent you as published. It will be a very valuable book, and every person should secure a copy.

CONTENTS OF THE MAY ENGINEERING MAGAZINE.

Fire Risks on Tall Office Buildings, Edward Atkinson; The Future "World's Highway" (2), T. Graham Gribble, C. E.; The Beginnings of Architecture, Hyland C. Kirk; The Dissolving Political Regime, William Nelson black; Bad Air in Theaters, C. S. Montgomery; Difficulties of Tunnel-Buildbuilding (illustrated), Emil Low, M. Am. Soc. C. E.; Education for the Workshop, Frederic A. C. Perrine, D. Sc.; Electric Street-Railway Investments, Lemuel William Serrell, M. E.; War a Hundred Years Hence, Emil Gautier; Water-Supplies for Cities and Towns (illustrated), Floyd Davis, D. Sc., Ph. D.; The Gold-fields of Ecuador, Russell F. Lord, C. E., E. M.

MATERIA MEDICA, PHARMACY, PHARMACOLOGY, AND THERAPEUTICS. By Wm. Hale White, M. D., F. R. C. P., etc., Physician to, and Lecturer on Materia Medica at, Guy's Hospital; Examiner in Materia Medica Royal College of Physicians and Royal College of Surgeons, etc. American Copyright Edition, edited by Reynold W. Wilcox, M. A., M. D., Professor of Clinical Medicine at the New York Post-Graduate Medical School and Hospital, Assistant Visiting Physician Bellevue Hospital, etc. To be printed in one compact, handy volume. P. Blakiston, Son Co. announce this book in press.

Notes and News.

Medico-Legal Applications of Photography.

At the meeting of the Photographic Society, on March 1st, the translation of a paper by Dr. Jeserick on the application of photography to the detection of crime was read and fully illustrated. The subject was divided into sections. First, the services to be rendered by instantaneous views of the actual scenes of crimes; secondly, microphotography of hairs, blood corpuscles, and other minutiæ. Another section treated of the use of the spectroscope in detecting the absorption of the gases of combustion by the blood of the victims of fires, in instances where it would be desirable to prove whether life was existing or extinct before the charring of the remains. Photographs of the spectra so obtained could be put in evidence in courts, as also could enlargements to a definite scale of the microphotographs.—*British Medical Journal.*

Should Doctors Advertise?—

A physician sits in his office chair,
And there broods on his face a look of care
While he groans and wails and tears at his hair.

"Alas! and alas! and alack!" he cries;
"Surely fortune and fame would both arise
If Old Ethics would let me advertise."

At last a bright thought comes into his brain;
Says he: "I must try that old racket, 'tis plain;
It worked O. K. once, and I'll work it again."

He wrote half a page on "The Evils of Pork,"
And the case of a man who swallowed a cork,
And a spoon and a knife, but got stuck on a fork.

The newspapers all extended their thanks;
He opened accounts at the various banks;
He'd baited with Ethics and caught all the cranks.

—*Doctor's Weekly.*

The Practitioner's Parasites.—

The London Lancet calls attention to a species indigenous to all countries. Few medical men of any standing have not experienced at some time or other the importunities of the begging impostor. Now as a poor but unfortunate fellow countryman, now as an invalid, as a dispenser out of work, as a brother practitioner in monetary difficulties, or as representing one of a dozen

other phases of distress, he is constantly turning up. He comes laden with manuscript recommendations, yet he is evidently devoid of credit. Like the rich, he, though poor, has many friends, and they too as needy as himself, and as willing to avail themselves of the charity which he first scented out. His name is legion, and his modes of "working" show him to be quite a social chameleon in adaptation.

Regulation of Dispensary Practice.—

Under this title the Cincinnati Lancet and Clinic comments on a method for regulating dispensary practice that has already been adopted by the Ophthalmic Hospital and Dispensary of Cincinnati. The institution hands the following card to those who are not considered eligible for dispensary treatment:

It has been suggested that you are not a proper subject for treatment in this Hospital. This institution is for those in poverty and distress *only*, and it will be necessary for you to furnish evidence on this blank from some responsible party that you are a proper person for the recipiency of its charity.

(Signed) ————————,
Executive Officer, Ophthalmic Hospital.

Date, ————————, 189—.

———————— is known to me to be worthy of the charity offered by the above institution. (Signed)

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A Monument to Dr. Samuel Gross.—

At the suggestion of the American Surgical Association, a committee has been appointed, having for its object the erection of a monument to Dr. Gross in Washington. The committee are:

Drs. William T. Briggs, Tennessee, Levi C. Lane, California; Solon Marks, Wisconsin; L. S. Pilcher, New York; A. Vanderveer, New York; James McCann, Pennsylvania; D. Hayes Agnew, Pennsylvania; J. Ewing Mears, Pennsylvania; S. H. Weeks, Maine; Hunter McGuire, Virginia; L. McLane Tiffany, Maryland; N.P. Dandridge, Ohio; H. H. Mudd, Missouri; J. Collins Warren, Massachusetts; B. A. Watson, New Jersey; D. W. Yandell, Kentucky; N. Senn, Illinois; Charles B. Nancrede, Michigan; W. H. Carmalt, Connecticut

Any contributions may be sent to Dr. John B. Roberts, 1627 Walnut Street, Philadelphia. In the event of a failure to collect a sum sufficient to complete the monument, the contributions will all be returned to the subscribers.

Accident Rooms.—

The British Medical Journal states that "accidents" are such frequent accompaniments of modern "sports," that Sandown Park has established an accident room. An accident room may perhaps come to be regarded as an ominous but necessary type of the accessory fittings for football grounds, race-courses, and athletics generally. An accident room has been provided at Sandown Park which is "a credit to the executive." Doctors are available "in cases of disablement." "Quite a comfortable place," the accident room is said to be, "with its clean beds and operating chair." At race-time everything is made ready for the doctors.

Homes for Medical Societies—

The Medical Record reports that sufficient money has been secured in Vienna to insure the erection of a suitable building for the use of the Imperial Royal Medical Society of that town. In Berlin it is announced that a similar but more elaborate building, to be called the Langenbeckhaus, and to be used as a home for the local medical societies, is in process of erection. The German Emperor subscribed $25,000.

London has long had a place for the meetings of its medical societies, and New York, in its Academy of Medicine, is perhaps yet ahead of all other cities.

Medical Proverbs.—

Tender surgeons make foul wounds.

Of the malady a man fears, he dies.

Diseases are a tax upon our pleasures.

He that would be healthy must wear his winter clothes in summer.

He that sits with his back to a draft sits with his face to a coffin.

A good surgeon must have an eagle's eye, a lion's heart, and a lady's hand.

A physician is a man who pours drugs, of which he knows little, into a body of which he knows less.

A Bore-bell.—

A Cincinnati physician has a secret office-bell, so says the Annals of Hygiene, which he calls a "bore-bell," and he believes it is a great thing. When he is tackled by a bore, or when his lady visitors insist upon giving him the history of all their relatives and their ills, the doctor's foot suddenly touches a spring, which rings the "bore-bell," and in rushes a messenger with an important message or telegram. The visitors tedious tale is interrupted, and she or he leaves the office because the doctor is so busy you know. The same message or telegram can be used a great many times, and the doctor's callers never suspect anything.

Prevention of Extension of Venereal Disease.—

The Lyon Médical states that the Dutch Colonial authorities have adopted the following plan to prevent extension of syphilis among the troops: Each soldier in barracks is allowed to take a mistress from among the native women, and these are registered and subjected to military discipline. If taken sick, they are treated in the army hospitals, and are reckoned in the non-combatant portion of the service. They number over 10,000, while there are about 30,000 soldiers.

A New Building for the New York Post-Graduate School.—

The directors of the Post-Graduate Medical School have purchased five lots on Second Avenue, on the corner of Twentieth Street, and will proceed, at no very distant day, to build a capacious, beautiful, and fire-proof building, to contain the Medical School, the Hospital and Dispensary, and the Babies' Wards.

Dr. Cyrus Edson's New Appointment.—

Dr. Edson has been appointed Sanitary Superintendent of the Health Department of New York. His long experience in this work fits him admirably for fulfilling the duties of this important office.

Therapeutic Brevities.

Injections of Corrosive Sublimate in Tetanus.—Celli (Arch. Ital. di Pediatria, November, 1891) reports a case of severe tetanus successfully treated by injections of corrosive sublimate. The patient was a child in whom tetanus appeared after a wound of the sole of the foot. Free incision and antiseptic dressings were first tried, but without avail, the symptoms increasing in gravity. The plan, first practiced by Baculo, of injecting corrosive sublimate was tried. During seven days nine injections were given hypodermatically, each consisting of 0.5 centigramme dissolved in water. From the time of commencing this treatment a progressive improvement was observed, and on the eighth day the patient was completely cured. As a direct result of the injections there was noticed progressive fall of temperature and pulse-rate, with gradual increase in diuresis. —*British Medical Journal.*

Jaborandi for Urticaria and Gonorrhœal Rheumatism.—Dr. C. Heaton, in Cincinnati Lancet and Clinic, states: I have not, for the past ten years, used any other remedy than jaborandi for urticaria. I give one-half teaspoonful of the fluid extract every half hour until four doses are taken, or until free perspiration or salivation is induced. I usually direct it to be given in the evening, and instruct the patient to avoid exposure to cold while taking it, and for thirty-six hours afterward. If necessary, repeat in same way in twenty-four hours. I have in no case had to repeat doses more than once to effect a cure.

I have also found jaborandi given in the same way a most excellent remedy in gonorrhœal rheumatism, when given in the beginning.

Vinolia Cream as an Emollient.—W. Ramsay Smith, Esq., B.Sc., Demonstrator of Anatomy, Edinburgh School of Medicine, reports the following case:

Some time ago the mate of a yacht in which I was sailing plunged his hand by accident into a large stinging jelly fish. On one of his fingers there happened to be an extensive granulating wound, and the pain excited in this wound by contact with the jelly fish was most excruciating. I applied some "Vinolia" Cream to the wound, and it operated like a charm. The pain disappeared in a few seconds, completely and permanently. This cream is of service in relieving itching.

Hypodermatic Injection of Iodoform in Localized Tuberculosis.—Dr. Weidemüller, in the Münchener Med. Abhandlungen, reports very favorably upon the treatment of localized tuberculosis by the injection of iodoform. This treatment was adopted in twenty-two cases, comprising four of disease of the elbow joint, four of the knee, five of the ankle and tarsus, and three of the wrist. Of the six remaining cases, two were due to multiple tuberculosis, two to indolent abscess, and two to fistula after resection. A solution containing from two to three grammes of iodoform in glycerin was used in each instance, with the following results: Two patients were cured, eleven considerably improved, and in one case only was the treatment entirely unsuccessful.

Induction of Premature Labor by Glycerin Injections.—Pelzer (Centralbl. f. Gynäk., No. 2, 1892) gave a very satisfactory account of his experience of this method. He employs chemically pure, sterilized glycerin. A hundred cubic centimeters are thrown up between the membranes and the uterine wall. Full precautions are taken, not only against sepsis, but also against the entrance of air into the uterine cavity. In a short time regular pains set in. The membranes present well, and labor is usually easy. Glycerin injections are, in Pelzer's experience, valuable not only for the induction of premature labor, but also for accelerating delivery at term. In uterine atony it proves very efficacious.

Sterilized Infant Foods.—Messrs. Reed & Carnrick have perfected their Infant Foods in keeping quantities by sterilization and by placing them in hermetically sealed containers. They claim that Lacto-Preparata, an all milk food for young infants, and Carnrick's Food, composed of half Lacto-Preparata and half dextrinized wheat, for use after six months of age, have now practically reached perfection in keeping qualities, and that they are the only infant foods in the market that will alone thoroughly nourish a child during the nursing period. Their Lacto-Preparata almost perfectly resembles human milk in character, composition, and taste.

Treatment of Hiccough.—Hiccough is sometimes a very troublesome symptom, and in children may persist without discoverable cause for long periods, and seriously interfere with sleep and nutrition. In such a case, a child, aged 12, Leloir (Rev. des Mal. de l'Enf., March, 1892) applied digital pressure for three minutes to the left phrenic, between the two attachments of the sterno-mastoid; the hiccough stopped and did not recur. He has since used the method in a large number of cases, and always with success; in some cases pressure for a few seconds has been sufficient, in others a few minutes.—*British Medical Journal.*

Early Massage in Fractures of the Ankle.—Von Burckhardt (Würtembergishes medicinisches Correspondenz-Blatt, No. 1, 1892) is decidedly in favor of massage employed as early as possible. He extends it to the plantar arch and combines it with passive and active motions. In fractures in which the broken ends remain *in situ*, splints are applied, and massage regularly instituted from the sixth or seventh day onward; at the fourth week it will be found that immobilization is no longer necessary; but the patient must remain in bed until the end of the seventh week.

Leucorrhœa.—Dr. A. H. Goelet, the editor of Archives of Gynæcology, Obstetrics, and Pædiatrics, July, 1891, in commenting upon the treatment of the gonorrhœal form, advises injections of creolin solution or sulphate of zinc in preference to a strong solution of bichloride. He also advises that once a day the vagina be dusted thoroughly with iodoform, aristol, or boracic acid, and one or two loose tampons, well coated with vaselin, may be introduced to prevent contact of the inflamed surfaces.

Peroxide of hydrogen will prove a good cleansing agent.

Camphor as a Zymocide.—Dr. F. W. Devereux Long, in the British Medical Journal, states that he had under his care an average of 150 cases of influenza a week, regarding it as a zymotic disease with probably a special bacillus of its own. Camphor was tried, and with so much success that thereafter rarely anything else was prescribed. The following is the formula:

Camphor spirits,)
Comp. lavender tr.,) ää ʒ ij (7.5 gms).
Chloroform spirits, ʒ j (3.75 gms).
Tragacanth mucilage, ℥ ij (70 gms).
Distilled water, q. s. ad ℥ vj (180 gms).

Two tablespoonfuls every four hours.

Rational Treatment of Gonorrhœa.—C. S. Cannaday, in Virginia Medical Monthly, advocates this plan of treatment: In acute

stages, anodynes, hot fomentations, citrate of potash, ♏xx–℥ss, three times daily. An occasional suppository of opium and belladonna. Physical exercise should be avoided; diet and beverages light and non-stimulating. No injections should be used until all acute symptoms have passed away, which rarely occurs under two or three weeks. When injections are begun, they should be very weak: 2 drachms of a solution of half a grain of sulphate of zinc in an ounce of distilled water is sufficient: this should be used as warm as can be borne, and retained not exceeding a minute. The greatest care should be taken to avoid injuring the mucous membrane by rough handling or by using the syringe.

An Effective Method for the Induction of Abortion.—Ræther, at the September meeting of the Hamburg Obstetrical Society (Centralblatt für Gynäkologie, No. 42, 1891), advocates the following plan of inducing abortion: Under ether, dilate the cervical canal; clear out the uterine cavity with the finger and, if necessary, a placental forceps. Scrape the placental site with a dull curette, and pack the uterine cavity with iodoform gauze, leaving an end projecting from the cervix to secure drainage. Done aseptically, this method is safe, effective, and rapid.

The Electric Douche.—Dr. W. S. Hedley, believing that the action of electrized water by means of the electric bath is the least painful way of applying the current to the body, uses a movable jet douche, obtaining his electricity from a seventy-four-cell Leclanché battery with a milliampère-meter in the circuit. With salt water he could obtain a stronger current. It seems not unreasonable that with combined electric and hydriatric procedures we have a therapeutic agent of considerable power.—*Lancet*, 1892, No. 3574, p. 469.

Asafœtida in Habitual Abortion.—For this purpose Guido Turazzo, of Padua, in No. 8 of the Centralblatt für Gynecologie, recommends the administration of pills of 0.1 gramme asafœtida in daily doses of from 2 to 10 pills, alternately increasing and decreasing the dose. He also states that the drug is an excellent remedy against nervous disorders in females, possessing at the same time the advantage of regulating the function of the bowel.—*Pharm. Zeitung*, No. 26, 1892, p. 210.

An Ether-Soap for Surgeons.—W. W. Keen, M. D., of Philadelphia, in the March Therapeutic Gazette, describes the advantages of an ethereal soap. He has found it the best yet tried for cleansing and deodorizing the the hands in medical and surgical practice. The bichloride of mercury may be dissolved in it in the ordinary proportions. Dr. Keen has used it constantly for some time, with great satisfaction, in private and hospital practice.

Benzoinal Solution of Menthol for Hæmorrhoids.—Dr. E. N. Bradley, in the New York Medical Journal, reports the successful use of this solution in alleviating the pain and overcoming the spasm of the sphincter in hæmorrhoids. The spraying of the hæmorrhoids with this solution was followed almost instantaneously by a cessation of pain, and by such a decrease in the volume of the tumors that their spontaneous reduction speedily ensued.

Marsh Rosemary as a Diaphoretic.—Sznabl speaks highly (Vratch, No. 3, 1892, p. 65) of the marsh or wild rosemary (*Ledum palustre, L.*, vel *Rosmarinum sylvestre, Syr.*) as a diaphoretic. From 1½ to 3 drachms of the dried and powdered herb, taken as an infusion, are said to induce profuse sweating. The leaves contain an essential oil (1.46 per cent.), leditannic, citric, acetic, formic, and valerianic acids, a bitter extractive substance, resin, and ericolin.

A Tonic Wine of the Extract of Kola Nut.—The following is recommended (Bulletin médical, No. 17, 1892):

℞ Fl. ext. kola nut, fl ℥ j (grms. 30).
Syrup of oranges, fl ℥ iijss (grms. 100).
Tinct. nux vomica, fl ℥ ijss (grms. 10).
Port wine, fl ℥ xxx (grms. 900).

For Laryngismus Stridulus.—

℞ Chloroformi, gtt. x.
Glycerini, ℥ iss.
Aquæ, ℥ j.
M. Sig.—A teaspoonful every thirty minutes.

—*Journ. de Méd. de Paris.*

Dandruff.—Le Moniteur Thérapeutique recommends applications of the following to the scalp:

℞ Borac, 5.0.
Aq. Cologn., 10.0.
Aq. font. 200.0.

Medical Progress.

TREATMENT OF PILES AND ALLIED AFFECTIONS.—T. Lauder Brunton, M. D., D. Sc. Ed., LL.D., F.R.C.P., F.R.S., in the British Medical Journal, March 12th, concludes his consideration of this subject by the following remarks on the treatment:

Turning, now, to the treatment of piles, we may consider, first, how we are to keep the liver in such a condition as to maintain a free supply of blood through it. For this purpose, we should insist on moderation in cases where we have reason to believe that either the food or the stimulants taken are in excess of the wants of the organism. The occasional administration of small doses of a mercurial purgative, followed by a mild saline, tends to keep the liver free and to prevent piles, although one may not know the exact *modus operandi* of the mercury upon the liver. Of course the saline ought not to be too violent, or it will tend to cause local congestion and make matters worse. Aloes bear an evil repute on account of their irritant action upon piles, but their effect depends upon the quantity given; and while a large dose of an aloetic pill will almost of a certainty produce rectal irritation, small doses, such as $\frac{1}{10}$ grain of aloin three times a day with each meal, will tend to lessen piles by keeping up a gentle peristaltic action and preventing constipation. My friend, Mr. Archer, tells me that he has used with invariable success half an ounce of castor oil given to begin with, and followed up by half a drachm every morning for a month.

I have already discussed the prevention of portal congestion from chills, but when it has occurred a useful application is a hot-water India-rubber bag, with a plush or flannel covering, put under the back of the neck, and a similar one over the liver. These tend to restore the equilibrium of the circulation and lessen portal congestion.

Exercise is useful in keeping the liver free, but this exercise must be of a certain kind. As I have already said, the liver is a very spongy organ, the blood pressure within it is very low, and the pressure under which bile is secreted is also very low. Both blood and bile, therefore, end to stagnate within it, but this stagnation is lessened by the liver being rhythmically squeezed, more or less forcibly, between the diaphragm and abdominal muscles. In a person standing or sitting upright, or lying on either side, this squeezing action is very slight; in a supine posture it is slightly greater. In ordinary walking it is also very slight, but in walking up a hill, and especially in climbing a mountain, the amount of pressure to which the liver is subject is considerable, because the muscles of the abdomen in such exercise are actively contracting, and the movements of the diaphragm during the panting breathing which occurs on exertion are much greater than when a person is quiet. A similar process of squeezing occurs in brisk horse exercise, either trotting or cantering, and thus riding is frequently beneficial for piles, notwithstanding the increased local irritation from contact with the saddle. Another useful exercise is to touch the toes with the fingers, keeping the knees straight, several times every morning.

A regular action of the bowels is of the utmost importance in preventing piles, because it tends not only to keep the circulation through the liver free, but prevents straining. The different means of ensuring this regularity of action would require a paper to themselves, but a teaspoonful of compound liquorice powder at night, or confection of senna either alone or with confection of sulphur and confection of pepper, are perhaps amongst the most widely employed of all the laxatives. No doubt the best times ordinarily for emptying the bowels is after breakfast, but if the piles tend to come down much it is better for the patient to get into the way of emptying the bowels every night before going to bed, so that he may secure rest in a recumbent position for several hours. Some patients in whom the piles come down easily spend a day of misery if they are obliged to go to the closet in the morning instead of the evening, because the piles tend to remain down all day and worry them.

The soft unprinted papers which are now commonly sold are a very great improvement upon the ordinary newspapers, but even they sometimes give rise to a good deal of irritation. In cases where the piles are very troublesome it is always well for the patient to wash the anus immediately after a motion. It is sometimes impossible for the patient to go from the closet to his bedroom and wash there, and I have found the easiest way of getting over this difficulty is for him to carry with him to the closet a soft sponge in a small India-rubber bag; an ordinary tobacco pouch is best. If it should be an earth closet, the patient should take the sponge full of water, and, after cleansing the anus gently with paper, he may thoroughly sponge, and then return the sponge to the bag. The anus may then be dried either with the porous paper or with a small napkin which he carries with him. In the case of a water-closet the sponge may be taken

dry, and after the closet has been used the plug may be drawn and the sponge dipped in the clean water which then fills the pan, and used in the way I have just mentioned. The patient should also take with him to the closet a small bottle of some preparation of hamamelis and some prepared wool. This should be sheep's wool deprived of its fat, and not cotton wool. The wool thus prepared is quite absorbent, and takes up the hamamelis readily. It differs from the cotton wool in one important particular, for it forms a kind of felt, which the cotton does not. A small pledget of the wool about the size of hazel nut should be dipped in the hamamelis and introduced within the anus, and a similar pledget, likewise soaked in the hamamelis, should be introduced so far within the anus that a few fibres of it at least are caught by the sphincter. The external pledget soon becomes felted together into a regular pad, fitting completely to the anus, and being retained by the few fibres caught by the sphincter, it will remain there for twenty-four hours, while a similar pad of wool might not remain as many minutes. The wool pad not only keeps the hamamelis in constant contact with the piles, but also affords a certain amount of mechanical support. In patients suffering from piles we frequently notice an almost involuntary tendency to sit on the corner of a table or on the arm of a chair, or to put the hand behind and press upon the anus from time to time; but the woollen pad, by affording a constant support, tends to lessen the necessity for pressure in any of these ways. Where the piles are chiefly internal, the hamamelis may be applied in the dose of half a drachm to a drachm, either diluted with water or, as is sometimes preferable, undiluted, by injecting it within the anus by means of a glycerin syringe. The success of this treatment in stopping hæmorrhage from piles is really extraordinary; within a week I have stopped the hæmorrhage from piles which were bleeding so profusely that a colleague thought that an operation would be necessary. But not only does the hamamelis stop hæmorrhage, it lessens the uncomfortable weight and aching pain which so frequently accompany piles, especially when they do not bleed; and it will even greatly lessen or remove the pain which occurs in piles when they become inflamed. I have tried various preparations of hamamelis, but I have not found either the tincture or the local extract, both of which are to be found among the recent additions to the Pharmacopœia, nearly so satisfactory as some of the proprietary preparations.

The patient requires to be carefully instructed in the mode of using it, otherwise disappointment may ensue. Some time ago a lady who was passing through London on her way to the Continent was seized with a sharp attack of piles. I was asked to see her at an hotel, but, not being able to go for a couple of hours, I hastily wrote down a prescription for hamamelis and gave it to the maid with, as I thought, definite instructions how to apply it. On going to the lady two hours afterwards, I found that she had used the whole bottle, with no relief whatever; nor was this to be wondered at, for the piles were internal, and the hamamelis had only been used externally. So satisfactory have I found hamamelis, that I do not often now employ ointments.

In obstinate cases of piles, great relief is afforded by the anal pad. The simplest is one of India-rubber with elastic straps to hold it in place, but it does not give, I think, quite the same relief as one in which the pad is pressed against the anus by a spring attached to a metal girdle which passes round the loins.

Before concluding this paper, I may mention another affection which frequently goes along with piles, and is most annoying, namely, pruritus and eczema round the anus. Both of these affections may be lessened by a simple remedy—eau de cologne applied to the itching surface with a small sponge or a pad of cotton wool, If the skin be at all tender, undiluted eau de cologne gives rise to intense burning pain, but this may be prevented by diluting the spirit before application. The diluted spirit does not have such a strong and permanent action in lessening the itching as the pure spirit, and, where the itching is at all great, the pure spirit may be used, notwithstanding the pain it causes, for it converts the intolerable itching into a severe smart, and this may be relieved by diligently fanning the part till the spirit evaporates.

NOTES ON CHROMOPHYTOSIS.—The term chromophytosis is now commonly employed in this country to designate the parasitic affection of the skin known in England as tinea versicolor, and on the Continent as pityriasis versicolor. The name implies that the disease is the result of a fungous growth and is characterized by a characteristic color. These peculiar features of the eruption are better expressed by a single name than by use of the term phytosis versicolor, which has also been employed as a synonym.

Chromophytosis,trichophytosis(ringworm), and favus constitute the three cutaneous affections which are generally known to result from the presence in or upon the skin of a vegetable parasite. The peculiar fungus which causes chromophytosis (microsporon furfur) can be readily demonstrated by placing beneath the microscope a few epidermic scales scraped from the affected skin, as the spores are much larger than those which give rise to ringworm or favus.

When we consider the frequent occurrence of chromophytosis and the well marked clinical features of the affection, it seems as though an error in diagnosis would be unpardonable. But the experience of every dermatologist shows that such errors are frequently made. It is a common idea among the laity, especially such as study the medical almanacs, that the disease is closely related to hepatic trouble, and this idea is strengthened by the use of the term "liver spots," which is applied to chromophytosis, as well as to chloasma or abnormal pigmentations of the skin. The same idea prevails among a certain class of physicians, who certainly ought to know better. Some regard the eruption as probably due to a syphilitic taint, especially if the moral character of the patient is not above reproach, while others ascribe it, with every other cutaneous eruption, to some impure condition of the blood. Hence it happens that chromophytosis—a purely local disease, one which affects only the most external portion of the skin, and has no more to do with the blood and internal organs than have grease-spots on the clothing—is frequently treated by arsenic, mercury, and a host of other internal remedies.

Of course such treatment can have no possible effect upon the parasitic disease, whatever good or bad effect it may have upon the patient. Of the ointments, soaps, baths, and other topical remedies employed at the same time, some may do good by accident, and in course of time the disease may be possibly cured without the physician becoming aware of the fact that he has utterly misconstrued its nature.

Generally, however, a failure to recognize the parasitic origin of the disease results in its partial cure by means of some local remedy of an irritant or parasiticide nature, assisted perhaps by the advent of summer and free perspiration. But with the discontinuance of the local remedy, or the return of colder weather, the eruption begins to spread rapidly from the uncured patches until the original extent of surface is covered, and so the disease may persist for many years, even on those who bathe frequently and are not unmindful of the hygienic requirements of the skin.

The chief clinical features of chromophytosis, which are certainly distinctive enough to make correct diagnosis easy, are the following:

The eruption occurs upon the trunk and upper extremities. It is usually observed upon the chest and scapular region. In well developed cases a few outlying spots may be noted upon the uncovered portion of the neck, upon the forearms, and upon the groin, but such localization is quite rare.

The eruption is macular in character, or raised so slightly as to be only appreciated by a delicate touch. When recently developed, there are numerous small round chocolate-colored spots, which later coalesce and form large irregular patches of a dull yellowish hue. The infra-clavicular spaces, a favorite seat of the eruption at its outset, are often found to be entirely free at a later period of its course. The eruption, though smooth in appearance and simulating a pigmentary disorder, is in reality a slightly scaly one. In cases where no recent bath has been taken, the finger-nail lightly drawn over the patch will leave a line of roughened epidermis.

It has been frequently asserted that chromophytosis is in some way related to pulmonary disease, and its presence upon the chest has even been regarded as an external evidence of weak lungs. It is true that in our clinics for chest diseases many instances of this eruption are brought to light. This results from three facts. Firstly, chromophytosis is a very common disease; secondly, the eruption is most likely to be discovered in a clinic where the chest is partially bared during an examination of the patient; thirdly, the vegetable organism causing the eruption thrives best, like other fungi, upon a moist surface, and the sufferer from advanced pulmonary disease, with his poor circulation and clammy skin, offers the best possible soil for the implantation of any vegetable parasite.

It has also been asserted that chromophytosis is especially common among syphilitic patients, but no proof of the assertion has been offered. If it be so, the fact can only be explained by assuming the same sequence of ill health, poor circulation, and consequent moisture of the skin, or by the fact that the average syphilitic patient in dispensary service is not over-particular about the frequency and thoroughness of his baths.

That the frequent occurrence of the disease in any class of patients depends solely

upon the condition of the skin, and not upon the state of the patient's health, is shown by its not infrequent occurrence among athletes, whose perspiring skins naturally invite the secretion. In short, a moist surface, such as is frequently found upon the sternal and interscapular regions, favors the development of the fungus; but why the disease should confine itself with strictness to the trunk and upper extremities, rarely, if ever, appearing upon other surfaces moistened by perspiration, is a question which is quite difficult to answer.

In the accompanying illustration it will be noted that there are no patches of disease upon the sternal and infra-clavicular region, where the eruption usually appears first and is most frequently seen. This is doubtless the result of excessive perspiration on the part of the patient. This has served to macerate the epidermis, and the parasitic fungus has been destroyed like a plant that has been too frequently watered.

Like other parasitic affections, chromophytosis is contagious, but, unlike its congeners, it is contagious only in a very moderate degree. A husband or wife will often have a well-developed eruption for a long time, while the occupant of the same bed remains entirely free. Whether individual skins are especially susceptible to the implantation and spread of the parasitic element of this disease, apart from the question of moisture, is a question which may be answered in the affirmative with more plausibility than positiveness.

The treatment of chromophytosis is usually a simple matter when the parasitic nature of the eruption is recognized. All that is necessary is to remove the superficial layer of epidermic cells from the affected parts—and this may be accomplished by either mechanical or chemical agents. The simplest plan of treatment, and one which acts speedily in most cases, consists of green-soap friction and the application of a saturated solution of sodium hyposulphite. The soap friction should be made in a daily hot bath, and the solution sponged over the affected skin morning and night. If the green soap be dissolved in an equal part of cologne-water, and the hyposulphite lotion made with rose-water, the result is a cleanly, agreeable, and effective method of treatment, and one well suited to patients in private practice.

In patches of long standing, requiring a more vigorous treatment, or in cases where a cure in the shortest possible time is desirable, the green soap may be rubbed into the skin and allowed to remain. This quickly produces a superficial inflammation and peeling of the epidermis. Caution should be exercised in applying it to the tender skin upon the neck or about the nipples and axillæ, lest too much inflammatory action be the result. If precipitated sulphur and pumice-stone, ten per cent. of each, be added to the green soap, the efficacy of the application is considerably increased.

In the treatment of every case, and especially those of long standing, it is necessary to continue the local applications for some time after the disease is apparently cured. Otherwise some of the spores, which have found their way into the hair-follicles, will escape destruction, and in a few weeks after discontinuance of treatment will give rise to a new and rapidly-spreading eruption.—Geo. Henry Fox, M.D., in *International Medical Magazine*, April, 1892.

THE HEALING OF TUBERCULOSIS.—William Osler, M. D., in an article in the Climatologist, has presented some interesting statistics, which demonstrate, first, the wide-spread prevalence of tuberculosis; and, secondly, the fact, as shown by his figures, that at least one-fourth of all infected persons recover spontaneously. In the great majority of these cases the disease is very limited and has made no progress, and in many instances could not have given physical signs. But even in more advanced disease, where the local indications are marked and bacilli and elastic tissue present in the sputum, arrest is by no means infrequent, and although post-mortem evidence shows that we are wrong in speaking of the process as *cured*, yet the condition is consistent with comparatively good health.

We may say, then, that in one-fourth of all persons infected the disease is never manifest, but remains local, and the lesions gradually heal. In another fourth of those attacked, local signs develop, but the physiological resistance is sufficient to arrest the process, or in modern language the battle is against the invaders, the day is with the tissues, and a permanent time is agreed upon, or sometimes a permanent withdrawal of the enemy. The remaining fifty per cent. of those infected fight, for months and years, losing battles until the final defeat comes.

The nature of the *tissue soil* is the important factor in tuberculosis; the seed is so widely scattered that upon each one of us, sooner or later, some grains must fall. He is in the habit of illustrating this point to his students by the parable of the sower who went out to sow his seed. In a large majority of persons the bacilli, which are inhaled

or ingested, find the conditions unfavorable to their growth—"*Some fell by the way-side;*" in a second group the bacilli find lodgment and grow, but they do not thrive, as the soil-conditions are not suitable; there is, in the language of the parable, "no depth of earth"—"*Some fell upon stony ground;*" and in a third group the tissue soil is favorable, the bacilli grow luxuriantly, producing the various local manifestations of tuberculosis—"*Others fell upon good ground.*"

Once infection has occurred, the chief indication is to place the person in surroundings favorable to the maintenance of the maximum degree of nutrition. The influence of environment has never been better illustrated than by Trudeau's experiment. Inoculated rabbits, confined in a damp dark place, rapidly succumbed, whilst others allowed to roam at large either recovered or had slight lesions. It is the same in human tuberculosis; a patient confined to the house, living in close, overheated rooms, or in a stuffy, ill-ventilated dwelling of the poor, or treated in a hospital ward, is in a position analogous to the rabbit confined in the cellar; whereas, a patient living in fresh air and sunshine for the greater part of the day has a chance comparable to that of the rabbit running wild. The very essence of the climatic treatment of tuberculosis is *improved nutrition* by change of environment. Fresh air and sunshine are the essentials with which, in comparison, altitude is of secondary importance.

Glycerin for Hypertrophied Tonsils.—The treatment by caustics or by the galvano-cautery is troublesome, tedious, and disagreeable. The applications must be made by the physician himself, and the difficulty of limiting it to the affected organ is very great. If the caustic be strong enough to do much good, it will inevitably get in contact with the tongue, or, in liquefying, run down into the œsophagus and cause painful ulcers. The guillotine is neater and quite satisfactory, although serious hæmorrhage sometimes follows its use. But occasionally a child will not submit to operation, or there may be special reasons rendering it unadvisable. In a case of this sort recently, my little patient's mother suggested the employment of glycerin.

Glycerin has long been one of our chief remedies in uterine enlargements and congestions. By its hygroscopic qualities it abstracts serum from the tissues to an extent that would scarcely be credited by those who are not familiar with its action. In a case of infiltrated eczema also, I once performed a notable cure by depleting the thickened skin by means of pledgets of cotton saturated with glycerin. When the infiltration had been reduced, the ointment of red iodide of mercury exerted its usual curative action, although the same agent had failed before the use of the glycerin.

In the case of tonsillitis, it did not seem likely to be of service. The constant secretion and swallowing of saliva would so quickly remove the glycerin that its action could not last long. But the child was fortunate in having a nurse of unusual qualities, and she promised to make very frequent applications. This was accordingly done, and at least twenty times a day the child's tonsils were painted with the purest water-free glycerin.

The result has been better than we expected. In the course of a few weeks, the enlargement has steadily lessened, and has now almost disappeared. The suggestion may be an old one, as it is one of those very obvious ones, that is apt to occur to any one familiar with the utilization of the hygroscopic quality of glycerin for other purposes. It can scarcely be expected, however, that this method of reducing hypertrophied tonsils will be successful, unless under such exceptionally favorable conditions as existed in the present case.—William F. Waugh, M. D., in the *Times and Register*.

The Best Apparatus for Disinfecting the Mouth and Nose in Diphtheria.—Dr. Joseph E. Winters, in a paper read before the New York Academy of Medicine, February, 11, 1892, describes what he regards as the best means of disinfecting the mouth and nose in diphtheria:

For this purpose the child should be placed on the side of the crib, and the rubber sheet arranged to catch the dripping, but he should under no circumstances be lifted from the horizontal position. If a Davidson syringe be used, the cleansing will be more complete and will met with less resistance than with any other apparatus. The irrigating should be done through the nostrils, for they cannot be tightly closed like the mouth, and with the first flow of fluid from the nose into throat the mouth is opened, and everything is discharged through the nostrils and mouth. It is occasionally necessary to syringe through the mouth. In this case the tip should be removed and the tube pass along the inner side of the cheek behind the last molar to the pharynx. In ordinary cases irrigation every two hours is sufficient. In severe cases

it must be practiced every hour, day and night.

For this irrigation nothing has proved as satisfactory as a ten-per-cent. solution of peroxide of hydrogen or a saturated solution of boracic acid. The passages must be thoroughly cleansed at each washing, and one pint of solution will be required. In the local treatment of diphtheria are included medicated steam from a croup kettle, and the inhalation of sulphurous acid gas through the burning of sulphur candles. For medicating the water in the croup kettle, add to one pint of water one ounce of spirits of turpentine and two drachms of oil of eucalyptus. In the use of the kettle plenty of rubber tubing is necessary, and the gas stove is the best means of generating the heat.

Mechanical Treatment of Erysipelas.—In the Therap. Monatsh., February, 1892, Kroell describes a modification of this method and gives the theoretical grounds on which it is based. The conditions necessary to the success of such a method are: (1) A specific relation of the characteristic microorganism to the cutis. Here the author is strongly of opinion that the streptococcus erysipelatis is not identical with the S. pyogenes, and that if suppuration occur it is the result of a mixed infection. (2) The spread of the disease in the cutis by continuity only. The appearance of the disease elsewhere, as in erratic erysipelas,is due to a second infection at that place; and (3) that erysipelas does not spread in all directions with equal ease. The specific inflammation is the chief element in the disease, the general symptoms being produced by the toxines absorbed. The more limited the former, the fewer the toxines produced. The elastic bandage which the author uses must be applied sufficiently firmly, but in such a way as to permit of the circulation being maintained in the parts so cut off. As regards facial erysipelas, the object is to prevent its spread to the scalp. The bandage is carried from the back of the neck round the forehead. The inflammation may spread to the margin of the bandage, but not beyond it. The thick skin of the neck usually prevents its spread to the trunk. The bandage must not be omitted as soon as the fever disappears. The absence of tenderness shows the limiting of the process at the bandage margin. The author has only once seen this margin overstepped, and then it was due to the incautious application of the bandage. The treatment is naturally not applicable to the trunk. In the extremities the distal application is alone available. If the disease is spreading towards the trunk, the slight disturbance in the circulation caused by the bandage may give rise to increased pain, and even gangrene. A slight œdema is immaterial, but any blueness of the limb must be avoided.—*British Medical Journal.*

Note on Prickly Heat.—Under the term "lichen tropicus" must be embraced three primary lesions, in frequency taking the following order: 1. A vesicular eruption, the vesicle, of the size of a pin's head, elevated on a roseolous, inflammatory base, being filled with colorless perspiration; sometimes arranged in segments of rings, at others diffusedly spread. On a superficial examination, it resembles much the efflorescence of measles or scarlatina, and occurs principally on the nape of the neck, the flexor surfaces of the forearms and legs, and the front of the abdomen. Even habitants for many years of semi-tropical regions are apt to exhibit this form, especially those who wear woolen underclothing. 2. A wheal with a red surrounding halo, accompanied by intense itching, which induces the sufferer to scratch off the covering cuticle, causing the erythematous effusion to develop a blood-scab. Its characteristics are shown on the backs of the hands and about the ankles, and may be taken for mosquito bites. 3. A copper-colored papule of largish dimensions, on whose surface after twelve hours may or may not appear a pustule. The front of the thorax exhibits this best. The older pathology which regarded prickly heat (lichen tropicus) as a papular eruption, and the more recent, as vesicular—hence termed "miliaria papulosa"—are both partially correct, but also erroneous, inasmuch as they recognize a single lesion. The treatment of all consists in washing the affected parts frequently with superfatted menthol, eucalyptol, or phenol (20 per cent.) soap, allowing the rubbed-in foam to dry, then mopping on with a soft linen rag this lotion: liquor plumbi subacetatis, liquor carbonis detergens, and glycerin, of each one ounce; rectified spirit of wine, three drachms; oxide of zinc, two drachms, to a pint of water; or smearing with the following ointment: Vaseline, two drachms; lanolin, two ounces; liquor carbonis detergens, two drachms; oxide of zinc, one drachm; menthol, twenty grains. If of limited extent, a bismuth and zinc powder may replace these. Cotton underclothing should be adopted and frequently changed.—J. A. Wetherell, M.D., in *London Lancet.*

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Original Articles.

CLINICAL LECTURE.

BY JOHN B. HAMILTON, LL.D., M.D.*

TUBERCULOSIS OF THE RIBS AND STERNUM.—We have before us to-day a case of caries of the sternum and ribs—more properly speaking, a case of tuberculosis of the ribs and sternum. The patient has been before the class once before. Under the old nomenclature it was customary to speak of caries as ulceration of the bone, that is, a destruction of the substance of the bone; but the term caries is now practically abolished with the incoming of the bacillus of tuberculosis. Its effect on the bone is, of course, to produce a localized inflammation, a swelling and thickening of the periosteum, then an excavation of the bony substance, increasing the size of the cavities (osteo-porotic bone), and the formation of pus, and, if unchecked, it proceeds until the entire bone is lost. Later on we may have other symptoms of disseminated tuberculosis. The bacilli are taken up and carried through the body. We also have glandular involvement, and in these advanced cases there may also be infection of other bones; in a word, we have what was formerly termed the development of a "scrofulous diathesis." So that the natural history of tuberculosis of the bones shows that it is not only not confined to the bone itself, but, if allowed to go on unchecked, invades the entire body.

When this patient was before us on a previous occasion an extensive incision was made, as you see, five or six inches long, following up the fistulous tracts as they were discovered—because one cannot always tell where a fistula reaches, from its appearance from the outside. I removed, as was then supposed, all portions of the bony structure that were involved in the disease. So far as the sternum itself is concerned, that portion of the operation seems to have been successful; not so with the remainder of the operation, which involved the ribs. It is here perfectly manifest that we still have some tuberculosis of two ribs, which will require further excision and removal; therefore the operation was incomplete at that time. To-day I will try to remove all of the diseased bone. First, I will endeavor to locate as fully as possible the fistulous tract. One peculiarity about the opening of these fistulas leading to a necrosed or carious bone is the extreme vascularity of the soft parts and the active hæmorrhage that ensues even on the slightest application of the probe to the tract. That, of course, is due to the tender granulations that spring up in the fistulous tract.

We now uncover the ribs that seem to be involved, and find out what portion still requires removal. Quite a free incision is necessary in this case, not only on account of the nature of the disease itself, but on account of the former operation and the amount of cicatricial tissue that requires to be cut through. With a sharp spoon I shall scrape away the cicatricial tissue about the opening of the fistula in order to get a fair view of the necrotic surface. Having split the periosteum, then, with a rongeur (bone-gnawing forceps), I shall cut out pieces of cartilaginous structure, taking care to leave the periosteum next to the pleura, so as not to invade the pleural cavity, if possible. It is not always possible to avoid the intercostal artery in these cases, but it is practicable in the majority of them when care is taken to push the periosteum away from the bone before applying the forceps. Usually with the sharp end of the forceps you can slide it between the periosteum and the bony surfaces. The bony parts that are destroyed are now removed so far as I am able to judge, but there still remains some pyogenic tissue in the surface of the fistulous tract, which will

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now be scraped out. Irrigation of the wound after the operation enables us to inspect it carefully; besides being antiseptic, we can then see whether further operative procedures will be required. In this case there seems to be much granulation tissue which should be removed, if we expect to be successful in stopping the formation of pus. This, of course, when the wound is full of blood, cannot well be determined, but by irrigation with the sublimate solution it can perfectly be brought into view. I shall remove these granulations with the scissors and scoop. I find it necessary in order to remove them fully to enlarge the wound, and, even at the risk of unduly prolonging the operation, I will follow up the granulations which were first uncovered by the irrigator. They seem to spring from the under surface of the cartilage. If you stop a moment, you will see, at the edge of the cartilage, that the great convexity of the diaphragm diminishes the thoracic cavity at this point (illustrating), so that, if we should go directly backward very far, we would not only go through the pleura with the incision, but pass into the diaphragm and open into the abdominal cavity. But it is useless to leave any portion of these fungous granulations in the tract of the wound to reproduce the pus microbe. We have now arrived at a point where the pus wells up from the bottom of the wound, showing that the extreme depth of the tract has not yet been reached. As the pus wells up from the end of the rib where the cartilage has been entirely removed, I shall cut away the end of the rib pretty carefully, dividing the periosteum, turning it back over the other border of the rib, in that way hoping to avoid the intercostal artery and any necessity for wounding it. Now, as I have before said, we seem to have reached the bottom of this cavity and its extreme limit, but we will again apply the irrigator, wash it out carefully, and it may lead us in some other direction before we shall have finished. You will please observe that I have succeeded in forcing the blade of the rongeur against the end of the rib, and simply enucleate the end. I have now removed the cartilage and the end of the rib for a distance of nearly three inches, and, as will be seen, without wounding the intercostal artery or the periosteum beneath it. We may expect in this case to have the rib reproduced. I have a case in the Marine Hospital in this city where four sections of ribs have been fully reproduced, so that it can scarcely be told where the removal was made, except from the cicatrices.

The wound and the old fistulous tract will now be rubbed with iodoform for the purpose of obtaining a specific effect on the bacillus, and a drainage-tube will be inserted at the lower angle of the wound, and the wound itself closed. Iodoform, as it exists in a state of powder, is not specially antiseptic; it is not even germicidal, but when it comes in contact with the fluids of the parts it decomposes, and the iodine is set free. It then becomes germicidal, and especially is it germicidal to the bacillus of tuberculosis. You see there is very little hæmorrhage from the wound, and I think we may expect the best result from the operation. There can be no doubt now as to all of the diseased structure being removed.

Tubercular Psoas Abscess.—We have here a child six months old. This little infant for the last two weeks has had a swelling on the inside of the thigh about the middle of Scarpa's triangle, and has complained of a good deal of pain, and, as I place my hand over the skin, I find there is a local elevation of temperature. On pressing my fingers deeply into the tissues, I can feel a fluctuating mass, and I infer from its situation that we have to deal with a chronic abscess. The indications are that it is a psoas abscess originating either in the sheath of the psoas muscle or on the anterior portion of the lumbar vertebræ. These abscesses, when they point below Poupart's ligament, are sometimes liable to be mistaken for an aneurysm, because, owing to the density of the fascia, the abscess does not point outwardly; it is confined in a given space, follows down alongside of the crural vessels, and, as the femoral vessel pulsates, this abscess seems to pulsate with it. I have seen several instances of this kind where there was a pulsating swelling, but in aneurysm we have the pulsation extending laterally as well as anteriorly. That is to say, an aneurysmal sac pulsates equally on

all sides. That fact affords some ground for differential diagnosis.

The history of the case will usually give you some indication of the nature of the malady, but not always. Within a few months a conductor of a Pullman car consulted me with reference to what he considered a femoral hernia, which was situated in Scarpa's triangle, and there was a distinct impulse on coughing, as is not uncommonly the case in large abscesses of the upper part of the thigh. He had an elastic webbing about the thigh bound on tightly, and he said it gave him some relief. He was not able to reduce the "hernia." He went to a physician, who had tried to "reduce" it. On making a careful examination, I told him I thought it was an abscess, and on putting an exploring needle into the swelling, pus followed the groove of the needle, establishing the diagnosis beyond question. Nearly half a gallon of pus came from the small incision that was subsequently made. The abscess cavity was thoroughly drained. The pus had doubtless been forming for a considerable time.

We have in the Presbyterian Hospital at the present time a little boy who was before the class some time ago, in whose case gallons of pus had from time to time made its appearance in Scarpa's triangle. In that case, at the clinic, five weeks ago to-day I made a deep incision in the lumbar region, passing a drainage-tube through from the lower opening behind the peritoneum, and brought the tube out at the upper opening. The boy is doing well, and has been gaining strength ever since the operation. I allowed the opening in the groin to close up of itself.

Let us now revert to this peculiar case. There is nothing for which it might be mistaken except a hernia, and we will exclude that from the peculiar character of the swelling of the thigh. In a femoral hernia we would have a circumscribed swelling. This swelling extends in all directions, and it distinctly fluctuates, and, when the child cries, there is no impulse given to the swelling. Speaking of the impulse given to tumors, in diagnosis we must remember that all fluids communicating with the abdomen give an impulse unless they are sacculated and strangulated. Not so, however, with solid tumors, which connect with the abdomen.

I will now pass an exploring needle into this swelling. There is a bare possibility that pus in this case comes from the hip-joint, but it is not very probable in a child of this age without some history of coxalgia. The pus, you notice, now flows down the groove of the needle. I was reasonably certain that there was pus present, but on first entrance of the needle it was not forthcoming. There is a large quantity of it escaping now with some blood, because it is very deep-seated. The blood comes from the skin and underlying structures covering the abscess. As soon as the tension is relieved by the evacuation of this pus, I will introduce a probe and endeavor to ascertain the point from which the pus springs, in order that we may make a more radical operation than simply relieving the swelling which here exists, and relieving the system from the liability to constitutional infection that always exists with the presence of large collections of pus. I cannot with a probe establish any communication with the abdomen, but the probe passes downward and backward against the femur, and then curves upward toward the abdomen, so that I have no doubt that there exists an opening, although I am not able to discover it at this time, into the abdomen and down the surface of the psoas muscle. We have to deal here with a case of psoas abscess, tubercular in its character and dependent upon the tubercle bacillus for its origin and progress, and, therefore, the patient will have to be subjected to constitutional as well as to other treatment necessary for the destruction of the germ itself. I shall now carefully irrigate the abscess cavity with a strong solution of iodine, 20 per cent., subsequently continuing the irrigation with a 5-per-cent. solution of iodine. If no connection shall be finally discovered with the abdomen, no further local treatment will be necessary, except that drainage by iodoform gauze will be maintained in order to allow irrigation at subsequent dressings. Should it be found necessary to communicate with the abdomen, I shall seek to reach the source of the pus by a deep lumbar incision.

ANKYLOSIS OF THE KNEE.—The next case is one of ankylosis with angular deformity of

knee-joint. There is a history of an accident to the knee some years since, resulting in an inflammation not tuberculous in its character, and we have the knee left in this condition, bent at a right angle. She comes to the hospital for relief. Naturally, we would revert to excision of the knee-joint as the best means of relief. We would do so if the case were an adult. But by removing the upper end of the bone—the epiphysis—we would prevent the growth of the bone in that direction. It is at once seen, then, that this is impracticable. There is left for us to perform osteotomy of the femur, making a cuneiform osteotomy; that is, a wedge-shaped piece of bone is removed from the femur at a distance of two or three inches from the lower end of the shaft, *i.e.*, in the center of the lower third. Tenotomy may also be required of the hamstring muscles, and we will then be able to bring the leg in a straight position, but with the condyles of the femur, as now, firmly attached to the head of the tibia. Ankylosis of the knee-joint is something that cannot be well remedied. We cannot, if we wish, make a knee-joint that would become serviceable, as the bones are fully united. When the ankylosis is complete, we cannot entirely restore the knee-joint, but we can restore the usefulness of the limb by osteotomy, and thus enable the child to walk without crutches by having an additional thickness of sole on the crippled side, so as to compensate for the shortening that would be created. The shortening will be further compensated for by the inclination of the pelvis. The child will naturally lean toward the lame side, and acquire the habit of walking so that the limp is not materially perceptible. She will go into the hospital and be prepared for the operation, and after a few days we will remove a cuneiform section of the femur, and perhaps make a section of the hamstring tendons. That seems to be best operation adapted to meet the requirements of this case.

The muscles of the calf are fairly developed, and there is no reason why she could not walk with comparative ease if the ankle were supported. Osteotomy in this case is preferable to osteoclasis, because with the chisel we may make an incision through the bone at exactly the point where it is desired. Osteoclasis higher up on the femur would be practicable. It would be practicable in the upper portion of the tibia, but it is not so in this portion of the femur. Where we use the osteoclast in the fracture of bones, there is precisely the difference in osteoclasis and osteotomy that there is between simple fracture and an open fracture. In osteotomy we must expose the wound to the dangers of infection, while with the osteoclast we fracture the bone and dress it as a simple fracture, which, of course, has the same advantage.

Disease of the Hip-joint.—This little child has been on extension for some time for not very advanced hip disease, but still far enough advanced to make the diagnosis complete and to make it a matter of extreme doubt as to the course that should now be pursued. I would have preferred to have put a brace on in this case so that the child could have walked through the ward, but it was not practicable owing to the fact that there was no "appropriation" out of which to purchase the apparatus. So we were compelled to resort to extension and to keep the little patient in bed.

I find some fluctuation at this point (illustrating), and we will therefore put the patient under an anæsthetic, make an incision down into the joint, relieve the pus and tension, and it will enable us then to inject iodoform emulsion into the joint and perhaps arrest the disease at this stage of its progress.

I will make a preliminary incision directly over the trochanter, and it is seen that pus flows from this wound in considerable amount. The next step in the operation, as soon as the pus has been evacuated, will be irrigation. We will wash out the abscess cavity with iodine water, and then I will pass the knife into the capsule of the joint, opening it, and then iodoform emulsion will be injected into the joint. The irrigation fluid used in this case is the five-per-cent. iodine solution, used as hot as can be borne, and, as it now comes away clear, it is evident that the abscess cavity has been thoroughly cleansed. I shall now pass the blade of the knife into the opening until I feel the neck of the femur. I shall then pass it along the neck of the femur until the head of the bone is reached, and then, passing it upward to-

ward the joint, I shall enter the capsule of the joint. Then we will introduce the iodoform emulsion. Extension of the limb will be made by the assistants, and while extended it will be covered with a plaster-of-paris bandage, and the limb will be fixed in that position. The best we can hope for, after suppuration has once been established in the joint, is that ankylosis may take place. Should, however, the abscess be reproduced, we will be obliged to reopen the joint and remove the head of the femur, and, if necessary, scrape away the acetabulum or whatever portion of bone seems to be eroded by the progress of the disease. Hand extension will be maintained until the plaster is set.

CARCINOMA OF THE BREAST.—This patient has had the disease which you see ten months. You notice, from her statement, how rapid the growth has been. It is only during the last three months that it has grown much. As I press my fingers about the tumor I find a nodular feeling encircling the gland at its margin—a "shotted feeling" would perhaps best express it. The center of the tumor is almost as hard as a stone, excepting directly at this point (illustrating), where it is broken down, pus has formed, and, of course, fluctuation is plainly perceptible. If you will look at the poor woman's face, you see she is suffering a great deal of pain, and has been for several months. There are few diseases where the pain is more acute than the pain of carcinoma of the breast in its advanced stages. Let us see if there is much glandular or lymphatic infection. Not infrequently in these cases we find the arm swollen almost from the wrist to the shoulder, infiltrated, and extremely painful. It is not so in this case, the disease being still confined to its original site and the skin adjacent, but the whole gland is firmly attached to the ribs, and is immovable.

Diagnosis: Let us consider the points in diagnosis. Extreme rapidity of growth, great pain, retraction of the nipple almost to disappearance, and the commencement of the last stage of carcinoma, that of ulceration. Fortunately for the patient, the glands in the axilla have not yet become involved, and that is what has preserved the general system from infection. Her mind remains clear; her appetite, although not so good as before, is still fairly good. She can eat her three meals a day if she gets them. Her main difficulty is lack of sleep, and she is rapidly becoming exhausted from the progress of the disease, which has proceeded to a point where it is inoperable. It would be absolutely useless to remove all of the carcinomatous structure in this case, leaving a broad extent of surface nearly one-fourth of the anterior surface of the trunk uncovered, for the skin is infiltrated with carcinomatous nodules, and the disease itself is dipping down into the periosteum covering the ribs. The case then, as it stands, is practically hopeless. If it were a case of epithelioma, instead of scirrhous carcinoma, I would in such a case use injections of oxygen, and I have had an instrument made for that purpose whereby we may inject oxygen into the tissues. If there is such a thing as a germ or fungus, as Russel declares, assisting in the production of carcinomata, it undoubtedly must belong to the class of anærobic germs which do not live in the presence of oxygen, and on that account oxygen is recommended. Methyl-violet, "pyoktanin," is used in epithelioma on account of the presence of oxygen in that compound. There is another point to be considered in injecting oxygen into the tissues. It is a life-giving fluid. It assists in the oxygenation of the blood, and restores the function which is impaired during the progress of the disease. It is a valuable therapeutic measure, and undoubtedly might prolong the patient's life.

I hope to be able at some future clinic to demonstrate this method of injection of oxygen. It will require a can of oxygen and the instrument, neither of which happens to be on hand at this time.

VARICOSE ULCER OF THE LEG.—I now show you a very marked specimen of varicose ulcer. You see the knotted and enlarged veins posterior to the ulcer. Here is the ulcer itself and the purple, indurated tissue surrounding it, showing that it has been many times the seat of an ulcerated process. Here is a knot of varicose veins swollen almost to bursting, and by examination it is seen that they extend almost

down to the ankle of that side; upward it is seen swollen quite to the saphena vein (saphenum majus). It is rather well marked in this case by reason of the dye in the trousers, and the knots are more prominent than they otherwise would be.

As to operative procedures, there are two radical operations for the treatment of varicose veins and a palliative treatment. For the palliative treatment, we have the man placed in the recumbent position, raise the limb so that all the blood would flow out of the veins, and then apply a bandage either of rubber or elastic webbing; then have him wear an elastic stocking for perhaps the rest of his life. Of course, if he wishes to be *cured*, we must adopt other and very different procedures. An operation which I prefer is the subcutaneous antiseptic ligation. Pass an eyed needle posterior to the vein while it is distended, taking it up in several places where it is notched; the needle is threaded and withdrawn, carrying one end of the thread. The patient is then directed to lie down, the limb is elevated, and the blood is pressed out of the vein. We have now interrupted ligatures passed posterior to the vein while it is distended, the vein is emptied by elevation and gentle stroking, and we pass the needle with the eye in the end on the outside of the vein, entering it at the same opening and out at the same exit as the first was passed. We thus bring the other end of the ligature in front of the vein, and we free the eye of the needle, pulling it out and tying it so that the knot comes under the skin. After that we wash the limb well with an antiseptic solution and wrap it with the usual roller bandage. The man remains in bed for a couple of weeks, sometimes less, depending upon the severity of the disease, and we have little difficulty in promising a cure and of seeing that promise fulfilled. In this case, as the man cannot go into the hospital, an operation will have to be deferred for the present. It is utterly futile to recommend any treatment for such an ulcer as this while the defective return circulation remains as it is. Moreover, a man with varicose veins, where they are so much dilated as in this case, is at all times in danger of hæmorrhage which may prove fatal; he is unfit for many avocations of life, and, if he be a young man, he should be subjected to immediate operation, and I always would so advise.

Ancient Fracture of the Clavicle, with Deformity.—This case illustrates the necessity for very early and prompt action in the setting of fractured bones, especially in children. The little patient sustained a fracture of the clavicle two weeks ago, and union is now perfectly firm. There is some deformity. It is perfectly easy to make a diagnosis of fracture of the clavicle when one fragment overrides the other, as in this case. The arm will be just as strong as the other arm in the course of time. The deformity will be very little, but it might have been made considerably less if the fracture had been earlier attended to. Take especially the bones of the face in children, and these fractures will unite in a very short time. Fractures of the nasal bones unite in three, four, six, or seven days after the accident. They are then quite firm and almost impossible to readjust. So it is with the other vascular bones of the face in children. Delays which are admissible in an adult in the reduction of a fracture are not admissible in a child. Fracture in a child, taken as a general proposition, should be adjusted at the earliest possible moment. We will in this case simply support the shoulder, without any attempt to do more than that, for the reason that the fracture has already united, and there is nothing to do but to sustain it until union becomes a little firmer and more consolidated.

Lupus of the Skin.—This is a patient of Prof. Senn, who is temporarily absent. The patient is not willing to wait until next week for an operation, so it will be performed today. It appears to be a tubercular enlargement of the skin itself, growing from an old cicatrix, and, on feeling of it, nodules can be felt quite distinctly, and it externally somewhat resembles a keloid. This disease is tuberculosis of the skin, which, as you know, is lupus, and all of the skin of the neck will finally become involved unless checked. We would have an immense ulcerated surface, and after years of time the patient would probably succumb to the ravages of the disease; but, if we are able to check the progress of the disease in the beginning by

thorough removal, there is no reason why a cure should not be promised.

The operation will be more extensive than the patient imagines, for a large extent of skin is involved. I shall have to excise a lozenge-shaped piece, and then endeavor to bring the skin together after its removal As you see, there is a pretty wide extent of surface that was involved in the cicatrix. I shall now remove with the scissors some small nodules which I find in the fascia underneath the skin. This operation is being performed under cocaine, which was injected five minutes before the operation.

Goitre.—In these three cases we have a goitreous enlargement of the left side of the neck. This is a unilateral broncocele, of the cystic variety. The first one you see would be a proper subject for removal, and there would be no particular danger of myxœdema after the operation, as one-half of the gland remains sound, and I think we can safely promise a cure by the removal of this swollen half of the thyroid gland. These patients, however, are here for injection.

This is a case where there has been a marked decrease in the tumor from injection. She has been here on six different occasions, she tells me, and the goitre has almost disappeared. There is still a little swelling about the extreme right end of the gland; it otherwise seems to have fairly disappeared. As in the other case, the removal of one-half of the goitreous gland can be effected without much difficulty, and the results are very good indeed. It is said by some who have performed the operation very many times that myxœdema, which is the danger to be feared in the total extirpation of the thyroid gland, does not occur if *any* portion of the gland is left *in situ*. However that may be, removal of one portion of the gland is certainly not followed by any disastrous results.

Biliary Calculi.—Here is a patient with acute jaundice and a history of gall-stones. There are none present at this time, but there is some tenderness over the liver. There is, of course, extreme yellowness of the skin and pain in the back.

An operation has lately been proposed in France in these cases of chronic gall-stones, which consists in incising the gall-bladder and dilating the common duct. I have not performed this operation, nor have I seen it done, but from a description of the operation I should say that, while it is very difficult, it might be desirable in case the patient would consent to such a radical procedure.

In this case there is very little for the surgeon to do, as there are no stones present, and it is only in case of obstruction where the gall-stones have not passed into the intestine that we are usually called on to relieve the patient. You doubtless remember the case that occurred at this clinic where we removed 27 gall-stones from a diverticulum in the side of the abdomen directly over the gall-bladder. In that case the boy finally recovered after a somewhat tedious convalescence with a biliary or pancreatic fistula. You will remember there was a swelling a little to the right of the umbilicus, on the same level, and at about the situation of the gall-bladder. It fluctuated, and there was quite a distinct impulse on coughing. On cutting into the tumor there were turned out 27 gall-stones, and the sac was then tied at its neck; it was afterwards reopened, and at first a greenish biliary fluid came out. After some weeks, you remember, the patient came before the clinic with a fistula from which there exuded a sort of salivary exudation, undoubtedly pancreatic, coming by regurgitation from the common duct. That case was treated by an injection of tincture of iodine, and, as I believe, finally recovered; at least, he disappeared from the clinic, and the last time he was here he was nearly well.

The operation is one that can be performed with comparative ease and safety in any case in which the diagnosis is clearly made out of obstruction from gall-stones. It is in cases such as this that that operation would be greatly desirable. The newer operation of dilatation of the common bile duct I have had no opportunity to try.

As the treatment of these cases is more medical than surgical, and, as in the condition that this patient is in at the present time, an operation is not to be thought of, I would not recommend it except in case of recurrence of the difficulty. In that case I could see every reason why we should cut down on the gall-bladder, incise it, stitch it to the wound, and perhaps try to dilate the duct.

ABDOMINAL SURGERY.*

BY THOMAS OPIE, M. D.

It is with no little diffidence and apprehension that I offer this Society a paper which is the beaten track and the hackneyed theme of a narration of cases, especially since it has been made up little by little as the fragments could be wrested from the busy activities of the practical doctor. I do not come before you with the promise to present new, and therefore interesting, facts; all of us might admit the paucity of facts, even in the great province of medicine, yet all are earnestly looking and longing for them. Every statement, proposition, or theory in any department of medicine, before it can be reckoned among settled facts, must be submitted to a calm, judicial consideration, publicly and openly, before the bar of the medical profession.

In new fields the caution and deliberation of the profession is especially commendable. The experience of many observers is desired; full and free discussion is sought; extensive statistics are essential. In submitting this statement of a year's work in abdominal surgery, though it be small as compared with that of many operators, it is to be hoped that it will elicit a full and frank interchange of experience, and thereby help, in some measure, progress in this department of gynæcological surgery. In doing so, I do not hesitate to say that every narrator of his personal experience should, when before the tribunal of the profession, feel that the withholding of a single error of omission or commission vitiates his confession. We want the truth, but more, we earnestly desire the whole truth. Statistics framed in this spirit would be invaluable to the profession and, therefore, to the human family. In other words, "every man should be his own critic."

The accompanying tabulated statement embraces thirty-two abdominal sections made in the twelve months, beginning November 1, 1890, and ending October 31, 1891. This list does not include the whole number of laparotomies performed at the Baltimore City Hospital during the time stated, since this institution opens its doors to all operators of good professional standing, who may see fit to attend and operate on such cases within its walls. The writer had the misfortune to receive an attack of septic empoisonment on December 10, 1889, from the prick of a pedicle needle, while performing a laparotomy on a case of septic peritonitis. This report, therefore, represents his first year's work immediately following that interruption, which lasted over a year.

It has been said, in connection with this important and relatively new work, that there is "too much surgery." In answer to this charge, I would say that this question can best be decided by surgeons.

> "Everything is by calm behest
> Resigned to him who understands it best;
> But every wordy, theoretic leech
> Can teach the teacher how he ought to teach."

It is a sad state of things if we can say of any individual surgeon that he is not wiser at the end than at the beginning of the year's work. He can, however, no more than the physician, claim immunity from mistakes. If he be wise or skillful he will not be chargeable with repetitions of the same mistakes; thus he, as well as his future patients, will profit by his failures. Moreover, there is inevitably an error in judging the work in this or any other branch of medicine by the results of individual operators. The whole of a thing can never be accurately determined by any one of its parts. The statistics in this new field are as yet comparatively small, and the facts are few. It is quite well established that the happenings incident to surgery will bear a very close relationship to each other in every one hundred cases. It is equally true that knowledge, calmness, deliberation, cleanliness, and promptness in coping with emergencies constitute the differences between surgeons. A succinct definition for science is "methodized knowledge," but something must be added to cover the work of the surgeon, viz., common sense and sound judgment It is also true that with a skillful surgeon each one hundred cases in his own experience should be a success beyond its predecessor.

Would it not subserve a good purpose to adopt some uniformity in our mode of collecting statistics? It might be an improvement if all members of this society would

* Read before the Southern Surgical and Gynæcological Association, at Richmond, Va.

alike report their work in this department fully from one meeting to another, or at least upon some uniform plan. As it is, the statements are fragmentary and, therefore, not so valuable, since successful cases are given prominence and failures are apt to be overlooked. It is agreeable to recount our successful cases; it is a very severe test to confess our losses. What there has been of error or detraction in my work, I will, as frankly and as fully as I know how to do, place before you conspicuously, in the early part of this statement; nor will I ask you to "hide the faults (you) I see."

UNSELECTED CASES.—The operations were performed consecutively as set forth in the accompanying table; they were:

Ovarian tumors	6
Chronic ovaritis	7
Fibroid tumors	4
Pyo-salpinx	5
Retroflexion with adhesions and dysmenorrhœa.	3
Exploratory incisions	3
Extra-uterine pregnancy	1
Abscess of ovary	1
Cyst of broad ligament	1
Cystic degeneration of ovary	1
Total	32

Nine of these patients came to me through the dispensary connected with the college, and were operated on in the amphitheater before the whole class at the College of Physicians and Surgeons. The remainder, twenty-three, were operated on privately. Twenty-seven were white and five were colored.

DEATHS.—The deaths were as follows:

Oöphorectomy for pyo-salpinx	1
Shock from ovariotomy	1
Oöphorectomy for acute mania	1
Abdominal hysterectomy for fibro-cystic tumor.	1
Total	4

No attempt will be made to describe fully each individual case, but the classification will admit of a separate discussion of the various classes of disease or operations, and enable the writer to select and lay before the Association what seems of special interest. In such a report as this, the deaths are commonly regarded as a stigma; nevertheless they are usually instructive. I must give a a full account of my stewardship, and consequently trespass upon your time with the details of each one of them.

Case 7.—Colored servant, single, had received dispensary treatment for several months for gonorrhœa. The diagnosis was made out correctly, as the sequel proved, as gonorrhœal pyo-salpinx. The urgent necessity for surgical interference was impressed upon the patient, but the operation was long deferred. On February 5th, 1891, a laparotomy was performed. Both ovaries and both tubes were matted together and adherent to the intestines in the posterior cul-de-sac. They were with difficulty removed. The left tube burst in detaching it, and its virulent contents were discharged into the peritoneal cavity. The pus was easily and freely squeezed out of both tubes, after removal. The abdomen was flushed out. Alarming hæmorrhage ensued from the denuded surfaces of the cul-de-sac, which was arrested by packing it firmly with iodoform gauze. This was removed in six hours. Her temperature rose to 101 degrees during the night and reached 103 degrees the next day, pulse 130. She died on the third day of septic peritonitis.

Post-mortem: Flaky lymph and pus over intestines. No fluid in abdomen. Ligatures had held securely.

Case 10.—White, age 50, married; visited me at the hospital about February, 1891, received an opinion that she had an ovarian tumor, which was fully developed and should be removed at once. This advice was disregarded. She returned home and remained there until about six or seven weeks later, when a letter from her physician impelled her to come on for the much-needed surgical treatment. She was admitted on the 16th of March and I operated on the 19th. Her condition was bad. Her temperature was 100° and pulse rapid. Her abdomen was very sore under palpation. The colloid contents and the solid elements of the tumor weighed over twenty pounds. The whole abdominal wall seemed ablaze with inflammation; the intestines were largely adherent to the tumor and matted together. The contents of the tumor would not run, but had to be scraped out piecemeal by the hand. She was profoundly shocked; hypoderms of whisky were given freely; milk,

beef-tea, and whisky were administered per rectum; though retained, they were of no avail. Death ensued at 3 A. M., I think from surgical and chloroform shock.

Post-mortem by Prof. Kierle: No blood in abdomen whatever; abdominal cavity perfectly dry. Ligatures tightly adherent to parts. Organs healthy. Died of shock.

Case 18.—White, age 18, single; family history good. Had had periodical attacks of mania. The first attack came on simultaneously with her menstrual flow at 15 years of age. Her menstruation was always accompanied by severe pain. Six months ago she had so severe an attack of mania that she was sent to an insane asylum. On the third day after the operation, mania set in; she could not be kept in bed. It was impossible to keep her bandage on. She grew more and more violent, and died January 23d, 1891—thirteen days after the operation.

Post-mortem by Prof. Kierle: Complete post-mortem not allowed. Kidneys markedly congested. No fluid in abdomen. Lungs congested. Brain not examined; probable cause of death here.

Case 32.—W. M., white; married when twenty-one years of age, sixteen years ago; had three children and one miscarriage.

Five years ago noticed a tumor in her abdomen, which gradually grew larger, and was said to be an ovarian cystoma. She suffered from frequent hæmorrhages. They were profuse in character and at irregular intervals. On examination, a tumor as large as a man's head was realized in the abdomen. The uterine probe ran up into it three-fourths of its length. An abdominal incision was made about eight inches long; the tumor was lifted out of abdomen and secured by Baker Brown's clamp. The bleeding was readily controlled and the peritoneal cavity flushed. The abdominal wall was closed with silkworm gut, and the stump secured in the lower angle of the wound. Though severely shocked, she rallied well. The mass, comprising the fibroid, womb, ovaries, and tubes, weighed ten pounds. The patient did well for three or four days, but after this her pulse and temperature began to rise, and she died on the seventh day of septic peritonitis.

Post-mortem by Prof. N. G. Kierle: Wound had entirely healed up; the clamp was tightly holding the stump. Abdomen contained two ounces of bloody fluid. The intestines were adherent and covered with inflammatory lymph. Kidney, soft and fatty; liver fatty.

EXPLORATORY LAPAROTOMY: *Case* 4.—Age 46; operated on January 5th, 1891. The exploration revealed malignant degeneration of the left ovary, with cancerous cysts studding the peritoneum and intestines. A large amount of abdominal fluid was removed. The cavity was thoroughly flushed and the walls closed. Patient returned home in three weeks, greatly improved. It must needs have been temporary.

Case 22.—Age 25, married, sterile. Operated August 26th, 1891. A large malignant growth was found in the left side, involving the corresponding ovary and the liver. Patient had icterus at the time of operation. Stitches removed on the eighth day. She improved rapidly, and returned to her home in good spirits.

Case 26.—M. O., age 33, widow; had two children and one miscarriage during wedlock. Operation Sept. 26th, 1891. Performed criminal abortion with a tortoise-shell bonnet pin. On admission a digital examination was made. The pelvis was blocked with exudates. In the center of the posterior cul-de-sac was a boggy point, the field all around being solid to the touch. Percussion and palpation indicated the extension of the inflammation and effusion high up on the left side of the abdomen. The temperature in the mornings was about 101°; in the evenings about 102½° to 103°. An exploratory incision was decided upon, and made in the median line. It was impossible to explore the pelvis; the strong resistant adhesions and exudation were an effectual stay law. A large amount of bloody serum was flushed out. The temperature at the time of operation, 102°, began to decline at once; the effusion was gradually absorbed, and at the end of three weeks there was no sign of the pelvic trouble. Drainage was not used in any one of the three exploratory laparotomies.

The number of these cases is too small to prove anything, but they are suggestive and add to already strong testimony, which is recorded, that a laparotomy done in a thoroughly aseptic manner is a warrantable

resort, when the indications are threatening and the diagnosis doubtful.

OVARIAN TUMORS.—The six cases of ovariotomy made good recoveries with the exception of No. 10, in which there was realized extensive peritonitis on opening the abdomen. This case is reported among the deaths.

Case 2.—White, single, age 38. An interesting case since, in addition to the cystoma of the right ovary, which contained two and a half gallons of fluid, there was on the left side a dermoid cyst, the size of a child's head. The contents consisted of bone, hair, etc. The pedicle of this tumor was four inches wide, hence there was some difficulty in constricting it efficiently, even in sections. This patient, strange to say, menstruated regularly up to August 25th last, within three months of the time of operation. She suffered from attacks of mental aberration during a year prior to the operation. Excellent recovery ensued, both mentally and physically, which has been maintained without interruption from the time of the operation up to this date.

Case 21.—Single, white, age 16. Her abdomen approximated the size of a woman at full term, before the operation. She and her friends noticed the enlargement of her abdomen for the first time four years ago, when she was twelve years of age. It is fair to conjecture that it had filled the pelvis and, like the pregnant uterus, had developed into the abdominal cavity at that time. If there is a parallel between the nutritive growths in these two conditions, this tumor must have started at a very early age, possibly when she was eight or ten years old. Her first menstruation was in January last, and it recurred irregularly afterwards. She bore the operation and the subsequent treatment with great fortitude, and made an excellent recovery. The other four cases of ovarian tumor presented nothing of special interest, save their complete and permanent recovery.

CHRONIC OVARITIS.—In this class there were six. Among them was Case 17, single, age 20. She began to menstruate at 15. Her first epileptiform spasm began coincidently with this event. From that time up to the time of the operation she had these attacks, both during the interim and at the time of the menses. The attacks were more severe just preceding the establishment of the flow. They were attended by convulsive movements of a pronounced character, followed by a period of stupor and sleep lasting fifteen or twenty minutes. At other times they were caused by over-tax, by mental worry, or excitement. The intermenstrual spasms were attended by slight twitchings and a short sleep. Her friends, prior to seeking relief by oöphorectomy, had spent quite a fortune in their efforts to cure her, having had her under the treatment of some of the most eminent neurologists in New York. Electricity, massage, drugs, all in turn proved unavailing. No difficulties arose in the operation. A few days after the operation she had several spasms, but no harm ensued from them. Convalescence was uninterrupted and rapid. She spent several weeks at the sea-shore, and paid me a visit on her return home. The young lady had gained notably in weight and strength, but the intermenstrual form of the attacks still occurred. At this writing I am unable to state her condition.

Case 18.—White, single, 18 years of age. An interesting case of this class, who had an attack of acute mania at the first menstrual flow. Six months ago, she had a recurrence of insanity, and was sent to an insane asylum. Oöphorectomy was followed by acute mania. She was uncontrollable. Death ensued from sepsis. The case has already been reported in this paper under the caption of the deaths.

Case 12.—White, single, age 21. Had always been sick since childhood, and had been for years subject to recurrent attacks of follicular tonsillitis. Her menses were established at 17, about which time she had a severe attack of typhoid fever. For six months prior to the operation of oöphorectomy she had been bed-ridden. She was hopeless, dyspeptic, and anæmic in the extreme degree. Her neuralgic headaches and ovarian pains were intolerable at each menstrual epoch. She readily accepted the proposal as to the removal of the ovaries. The operation was borne courageously, and her convalescence was uninterruptedly good. Upon her return to her home, in Baltimore,

she relapsed into her former despondent condition. She has not fulfilled my expectations as to complete cure, though she has improved physically.

Case 14.—Age 23, white, single. Was healthy until 13, when menstruation began. At first the recurrences of it were painless and regular. An interruption of four months occurred, and dysmenorrhœa, menorrhagia, and ill health followed. Tormented by her physical pains and disqualification, and her inability to support her aged parents, she sought oöphorectomy as a last resort. It has brought about excellent health and capabilities.

Case 16.—White, single, age 22. Unlike the preceding case, has led a life of luxury and ease. Her dysmenorrhœal pains in defecation and general depreciation in health during five years caused her family to seek the removal of the ovaries. Perfect satisfaction as to health, cheerfulness, and comfort has come both to her and to her friends.

Case 27.—Age 39, colored, a washerwoman, widow. Operation October 8th. Had one full-term child and one miscarriage. This patient was operated on by me one year ago for a deep laceration of the cervix. While the parts healed well, she was not benefited as regards her distressing and disqualifying dysmenorrhœa. The appendages were removed. She is still in the hospital. All the indications betoken a happy issue out of her afflictions.

It is noteworthy that five out of six of these cases of chronic ovaritis were single, and that their ages range from 18 to 23 years.

Pyo-salpinx.—Five cases under this heading all made good recoveries but one, which was a very unpromising one. Both ovaries and tubes were packed in one conglomerate mass in the posterior cul-de-sac; one of the tubes ruptured on removal, causing septicæmia. It is interesting to relate, as bearing on the ætiology of this disease, that every one of these cases was undoubtedly gonorrhœal in origin. Two had been under treatment in our dispensary by Dr. W. S. Gardner, and the other three were ladies who were innocent victims to the viciousness of their husbands. I prescribed for one of the males a short time prior to marriage for gonorrhœa, and was greatly astonished, not long after that event, to find him with a bride whom he had infected with the disease. Six months later the uterine appendages were removed. The other two confessed to having transmitted it to their wives. One of the cases was an extremely critical one, since a pus tube had burst and discharged through the rectum three months prior to the operation. From that date to the operation the lady was disqualified for any household duty, though she had around her a large family. When operated on six months ago, she weighed 130 pounds; she now weighs 160 pounds, her weight when in former good health.

Fibroid Tumors.—Two abdominal hysterectomies were performed for fibro-cystic degeneration of the uterus. The first was Case 11. The abdominal incision was 14½ inches long from the sternum to the pubis; the tumor weighed over 20 pounds. Its vertical circumference measured 23½ inches, and its transverse circumference 22¾ inches. There was, in view of the very large pedicle, considerable difficulty in securing her against hæmorrhage, hence the intra-abdominal method of treatment would most likely have failed, had it been resorted to. A full description of this case has already been published in the proceedings of the A. M. A. of 1881. The patient was unburdened, and health is now being enjoyed.

The second was a case of supra-vaginal hysterectomy for a fibro-cystic tumor of the uterus. This has been described.

Case 24.—The third case of fibroids gave the following history: Her first intimation of a tumor was October 18, 1890. While playing on a piano, she had a rush of blood, which filled a chamber. This was the time of her menstrual flow. She bled alarmingly at each menstruation. Prior to operation she had bled continuously for a month. Diagnosis was intramural fibroids, chiefly occupying the posterior wall. The pelvis was well filled by the tumor. While I hoped to find the ovaries, due preparation was made for a hysterectomy. They were happily in front and were removed; not a drop of blood has appeared since the operation. She made a good recovery.

Case 5 was one of sub-peritoneal fibroids.

The patient had been bed-ridden for six months, though sick and disqualified for all the duties of a wife for years. The uterus was retroflexed by a fibroma the size of a hen's egg, situated on the upper posterior part of the fundus. In addition to this there was a small intramural fibroid the size of a filbert, located on the posterior wall at the junction of the body and neck. Myomectomy was done, and both ovaries and tubes were removed; she has made a good recovery.

Hysterorrhaphy.—In two cases, No. 1 and No. 25, hysterorrhaphy was performed after the removal of the appendages for retroflexion of the uterus, with chronic ovaritis and dysmenorrhœa.

The operation by suturing through the anterior uterine wall may well be considered obsolete. The first case I performed on November 13th last, suturing through the stump of the uterine appendages, without scraping or otherwise injuring the uterine wall. The outer parts of the sutures were cut off at the end of two weeks, and the remaining parts allowed to fall back into the abdomen.

In the second case, No. 25, the sutures were simply made to pierce (without tying) the ovarian ligament, and brought through the abdominal wall opposite their respective insertions about 1½ inches from the incision, and tied over a bridge of skin ½ inch wide. In two weeks they were removed by cutting one side and drawing them out entirely. Both cases when discharged were in excellent condition. The uterus in each case was well secured in its rectified position, as attested by several competent examiners. Further time is necessary to establish the permanence and value of these operations.

Cystic Degeneration of Ovary: *Case* 23.—Married, 23 years old. Has had no full term children, but three miscarriages, during the first third of gestation. Patient had been subjected to considerable local treatment without avail. Her present trouble with the left ovary had been recognized during the past three years. The possibility of pregnancy was broached, but her attending physician said he had lately been making intra-uterine applications, and hence was confident she could not be pregnant. On opening the abdomen, the diseased ovary was readily verified, but the uterus was unduly large, and the cervix was dilated with parallel bar dilator, so as to explore its contents. A fœtus of six weeks was withdrawn, and the ovaries were removed. The subsequent history of the case was uneventful, save that recovery was rapid and complete. The ovary on the left side was represented in the thickened portion of the wall of a cyst, the size of a walnut.

Extra-Uterine Pregnancy in a Double Uterus: *Case* 30.—Age 32. Had been married fifteen years, but was without offspring. Since girlhood she had been regular with menstruation. For four months past her menstruation had been scanty and irregular, and her general health miserable. One month prior to the operation she was compelled to go to bed. When the patient was first examined in consultation with Dr. Wm. Gombel, of Baltimore, her attending physician, there was a hard resistant mass occupying the left side of the pelvis, pressing upon the rectum and causing intolerable agony. Laparotomy was determined upon. A large encysted mass, the size of two fists, occupied the posterior and lateral regions of the pelvic basin, pushing the double uterus to the opposite side. At the outset, in enucleating it, the blood contents escaped; the sac was shelled out and the pedicle ligatured. The right ovary was removed. The abdomen was flushed, the drainage-tube inserted, and the abdomen closed. The double uterus was realized by sight as well as touch, it having been held up in the incision for a satisfactory recognition by all present. There were two distinct fundi, with deep sulcus between them. The cervix was single. The drainage-tube was taken out in 24 hours. The patient during about 10 days, although doing well physically, had an attack of mania. Providentially she was at no time unmanageable, though she was watched with the most assiduous attention by her nurse. She entertained two vagaries, and aside from them was sane and logical. One was the constant dread that she was to be operated on by the doctor again, and when either of her attendants entered the room she was frantic with fright. The other departure was that she

could hear her family talking in the next room. She would answer their supposed questions and plead pitifully that they be admitted. She is now perfectly sane, has recovered from her stitch abscess, which followed the drain-tube, and is out of harm's way. A microscopic examination of the tissue of the sac showed it to be placental.

Stitch Abscess.—This complication occurred nine times, a much larger number relatively than I have seen recorded heretofore, and, while no case proved disastrous, several were exceedingly annoying in delaying patients in hospital. They occur most frequently in cases where the drain-tube has been used. The early opening of the abdominal dressings, for any purpose, favors their occurrence. When the dressings remained intact for seven days, there seemed to be the greatest immunity from the stitch abscess. Dr. Welch says: "A coccus, which may appropriately be called the staphylococcus epidermis albus, is a nearly, if not quite, constant inhabitant of the epidermis, lying both superficially and also deeper than can be reached by present methods of disinfection of the skin. The coccus is found frequently in aseptic wounds. It may be the cause of disturbances, usually of a relatively slight degree, in the healing of the wound, especially when drainage-tubes are inserted. It is the most common cause of stitch abscesses in wounds treated aseptically and antiseptically."

Drainage in Abdominal Surgery.—Drainage was resorted to in but three cases during the year. Case No. 2, ovarian and dermoid cyst, had a drainage-tube in five or six days, and I am convinced it retarded her convalescence.

Case 28.—Extra-uterine pregnancy; had a tube in less than twenty-four hours. If I may judge of the necessity for it by the quantity or quality of the discharge through it, I should say it did no good. A small superficial abscess at the entrance of tube followed its withdrawal.

Case 32.—Ovarian abscess. Had a drain-tube in about twenty-four hours. An abscess occurred at the site of its entrance. The quart of pus which was saculated in this case was removed without an atomic part of it touching the peritoneum or the wounded parts, otherwise her fate would have been sealed, as was the case in No. 7, where the pus-tube burst and death ensued on the third day of peritonitis. Even in such a case as the latter, the most we could do would be to thoroughly flush out the abdomen.

I am of the opinion that there is even too much flushing done; it is but seldom called for. A plentiful supply of fine, properly-prepared elephant-ear sponges will do away with flushings, in most cases, and remove the necessity for drainage. They are efficient helps in keeping the abdomen free from infection. They can be utilized in keeping back the intestines, in occupying the cul-de-sac, in positions below the pedicle, in taking up blood or secretions, in staunching hæmorrhage, in separating adhesions, in protecting the intestines while closing the abdomen. The assiduous personal attention of certain workers using the drain-tubes has caused them to escape the disasters which have befallen the less careful and less skillful surgeons.

Nature's plan for curing the unsightly rents the surgeon makes when he opens the abdominal cavity is to seal hermetically the sacred cavity of the peritoneum in twenty-four hours. This kindly and providentially comports with its sensitiveness and its fitness for the cultivation of germs of disease. Does not this prompt sealing of the peritoneum speak with unmistakable logic to the point of striving hard for an aseptic operation and for securing immediate and absolute closure?

The oft-repeated removal of the dressings of the patulous drainage-tube must of necessity be a very great danger; surely it favors decomposition and invites germs. All surgeons are aware that, after an anæsthetic, restlessness and jactitation are not wholly restrainable. It is easy to conceive how physical injury may accrue to the patient during this critical time from these not at all innocent, yet smooth, glass tubes. I believe drainage is doing more harm than good and, therefore, ought to be abandoned by the abdominal surgeon.

There is a dual personality as well as power concerned in all surgical work. The one is the surgeon, who skillfully meets and disposes of the crises in the more mechanical part of the work, and therefore receives the

plaudits of the multitude; the other is the influence behind the throne, more potent than the throne itself, which reaches beyond the eye, the touch, and the knife. I scarcely need say it is the modest, yet oft-despised, laboratory physician, who is teaching us the hidden leaven of disease. Let us give him grateful recognition for the pivotal facts and secret springs in recent surgical success. When he says bruised tissue is a paragon field for the cultivation of infected germs, let us heed the warning and cast aside the drainage-tube.

Dr. Parkes says as to drainage: "Views and practices concerning drainage have materially changed even since the antiseptic era began. Our predecessors drained to permit escape of pus, which they knew would form. Until lately we have drained in order to prevent its formation. We seem now to be on the eve of an era when we need to drain but little or not at all. We resort to drainage now only of necessity, in septic or infected cases. In other cases we drain mainly from habit, or from fear. Indeed, when we start afresh, as it were, with previous infection, the practice of drainage is a confession of fear or of weakness, both of which are alike unscientific and unfortunate. It even seems to me that in many cases, where all other aseptic requirements have been met, we do much more harm than good by the use of drains."

[Accompanying this paper was the detailed statement of thirty-two unselected cases of abdominal section, performed by Dr. Opie during the year 1890–91.]

THE ACTION OF SYZYGIUM JAMBOLANUM IN DIABETES MELLITUS.

BY DR. H. HILDEBRANDT, OF BRESLAU.*

Most authors recognize two chief factors in the evolution of diabetes mellitus—the abnormally augmented production of sugar, and the diminution of subsequent decomposition and consumption of the sugar derived from the food, *i.e.*, from its albuminates and amylaceous elements. The first assumption presupposes abnormal fermentation under the influence of a "saccharifying ferment." Thus far no researches have been made into the ferment contained in the diabetic's blood, but nevertheless a striking increase of diastatic ferment in the urine has been shown by many authors.* Grützner† found in the urine of a diabetic, in addition to other ferments, a considerable augmentation of the peptic ferment, and is disposed to ascribe this to incomplete destruction of the ferments passing into the blood. As a matter of fact, the destruction of the absorbed ferments does take place in the normal organism. I have observed that certain organs, especially the pancreas, possess the power of rendering vegetable ferments inert. Schnapauff‡ oberved a similar extinction of several animal ferments in the organism. Then frequent degeneration of the pancreas was discovered in diabetics, and v. Mering and Minkowsky§ were able to render animals diabetic by extirpation of the pancreas. Here, also, deficient extinction of the saccharifying ferments could be accepted as primary cause.

My investigations were, then, in order to ascertain in what measure the "anti-fermentatives" (formerly employed especially in diabetes) and the *Syzygium jambolanum*, recently recommended warmly by various authorities, would affect the activities of the sugar-forming ferments. I have used exclusively the fruit shells of *S. jambolanum*. An aqueous extract (1 part substance to 30 parts distilled water) was prepared from the pounded material, expressed, and filtered. The filtrate contained a reducing substance which, on fermentation with yeast, could not be completely removed, besides yielding an acid reaction. In order to exclude from the experiments the mere acid action, exact neutralization was effected with sodium carbonate. Ordinarily 10 c. c. of the neutral liquid were measured off, and the clear ferment solution under investigation added drop by drop.

* Translated by Joseph Helfman, from No. 5 of the Berliner klinische Wochenschrift, 1892.

* Bendersky; Virchow's Archiv., vol. 121, pp. 577–8.

† Breslauer ärztliche Zeitschrift, 1882, No. 17, and Deutsche med. Wochenschrift, 1891, No 1.

‡ Beiträge zur Physiologie des Pepsins, J. D. Rostock, 1888.

§ Berliner klin. Wochenschrift, 1890, p. 1021.

The result disclosed that *various vegetable and animal ferments were weakened by the extract, in their action upon their specific substrata.* In a slight measure even on the simultaneous addition to ferment and substratum, but more distinctly after previous preliminary action of syzygium on the ferment (before *the addition of each substratum*) were we enabled to observe regularly a diminution of the intensity of the fermentation process, in comparison with the control-tests. With exclusively vegetable ferments, emulsion and myrosin, the separation—noticeable by the odor developed—of amygdalin and myronate of potash in the samples to which syzygium was added was tardier and feebler than in the control-tests. In investigating the influence of syzygium upon the amylolytic and saccharifying ferments, I proceeded by removing specimens at intervals from the little glasses in the thermostat, and tested these with still present, not yet fermented substratum (starch, glycogene). Here, likewise, I could observe, usually after two to three hours, a distinct retardation of the ferment process in the specimen containing the syzygium, inasmuch as the blue coloration (of the starch) following here upon the addition of Lugol's solution was more intense than in the control-tests. Later on, when the substratum could not be discovered at all in the control-tests, the addition of iodine to the syzygium specimens yielded a distinct starch or glycogene reaction, although less distinct than at the beginning of the test. In several instances the ferment was so weakened that, after standing for twelve hours in a warm temperature, complete transformation of the substratum had not occurred; in individual cases the changes could be followed as far as erythrodextrin (recognizable by its red coloration with iodine). In the majority of cases, however, ultimately complete, even though very much retarded, conversion resulted; I waive the question whether syzygium simply impedes and does not destroy the ferment in its action, or whether, granted that it destroys, syzygium was here added in too small quantities.

The influence above portrayed is exercised by syzygium upon vegetable diastase as well as upon the saccharifying ferments of the blood serum, the saliva, and the pancreas-extract. A similar action on pepsin, *per contra*, could not be observed.

Comparison with neutralized organic acids —for the acid reaction *per se* disturbs the fermentative process—such as salicylic acid, lactic acid, vinous acid, citric acid, and others, which, like salicylic and lactic acids, have been, in a measure, practically utilized in diabetes mellitus, yielded usually an entirely negative result; a slight effect resulted in several tests from neutralized salicylic and lactic acid. In these experiments as much of the acid was always employed as would correspond to the original acidity of the quantity taken of syzygium extract. Moreover, I instituted control-experiments for the purpose of learning in what degree the heat of a drying oven injuriously affects the ferment; specimens not treated with syzygium showed no such appreciable weakening of the ferment as when simultaneous treatment with syzygium was resorted to. The theory that syzygium so modifies the substratum (starch, glycogene) as to render it invulnerable to the ferment, I found to be refuted by the fact that the addition of new ferment completely transformed the substratum.

Even though we are not yet able to designate the substance which acts upon the ferments—according to my observations, it is certainly not itself a ferment; it will bear boiling temperature, is soluble in alcohol, etc.—it is assuredly not tannic acid, which is actually contained in small quantities by the fruit-shells or pods (more abundantly by the kernels). In the aqueous extract of the fruit pods used in my experiments (the reaction characteristic of tannic acid did not follow the addition of ferric chloride, 1:40,000) the reaction is plainly visible. Still weaker solutions, which no longer produce turbidity of the ferment solution (in distinction to the above-mentioned concentrated solutions of tannic acid, which occasion a slight diminution of the fermentative action), proved without any effect upon the process of fermentation.

With respect now to the fact that the organism contains ferment-destroying substances, I have endeavored to learn from further experiments whether the concurrent presence of syzygium disturbs or reinforces this process. In preliminary experiments I

have established the fact that the neutralized pancreatic extract * tends to destroy foreign ferments (vegetable diastase). I accordingly subjected neutralized pancreatic extract to the action of syzygium extract, using for control purposes an equal quantity of indifferent liquid and pancreas extract.

TEST 1.	TEST 2.
3 c. c. pancreatin	3 c. c. pancreatin
+ 5 c. c. syzygium ext.	+ 5 c. c. water.

After one hour I added to each 3 drops of a 5-per-cent solution of diastase, then 4 c.c. of 1-per-cent. starch-clyster to each. The content of starch after the addition is therefore ⅓ per cent.

After standing for three hours in the drying oven, specimen 1 contains starch; specimen 2, no starch.

Hence, in the presence of both syzygium and pancreatin, the conversion of starch into sugar was even more retarded than by pancreatin alone.

Syzygium could perhaps be of service in diabetes by limiting the saccharification of the amylaceæ in the intestinal canal of the stomach, and the saccharification of the glycogene in the tissues; its employment would be favored by the specially fortunate and important fact that it in no way disturbs albumen digestion (perhaps even promotes it).†

In connection with the foregoing I have made experiments for the purpose of ascertaining how far *Syzygium jambolanum* is capable, within the living organism, of affecting the action of incorporated ferments, and with reference to my earlier studies of "Intoxications through Hydrolitic Ferments,"‡ I was interested chiefly by the question whether syzygium is capable of influencing the toxic action then described. In several experiments before and after the subcutaneous ferment poisoning—using invertin and emulsin—I administered syzygium extract (not neutralized) to rabbits by means of the tube-sound. Each animal was given the extract of 10 grains syzygium fruit, and the last time 12 hours after introduction of the ferment poison. A therapeutic result was not observable.

Obviously, moreover, the organism is less sensitive to its own than to foreign vegetable ferments, and it would seem as though syzygium is not capable of modifying the toxic action of the latter ferments, just as it proved powerless against pepsin and trypsin, and it is alone capable of influencing saccharification.

On the influence exerted by this agent on saccharification within the organism I shall report in a subsequent communication.

* Dry pancreas, according to Kühne (obtained from Grübler), is extracted with 0.1 per cent salicylic acid, expressed, neutralized, and filtered.

† In special experiments I was able to observe that pepsin (in acid solution) exercises no influence on the active principle of the syzygium extract.

‡ Virchow's Archiv, Vol. 121, p. 21.

MAY CRYSTALLINE ACONITINE NITRATE BE PRESCRIBED WITH PERFECT SAFETY?

It is well known that aconitine nitrate, even in very slight doses, produces toxic accidents more or less serious, and several practitioners have for this reason renounced the use of this medicament, which they consider too dangerous, thus foregoing its very efficacious therapeutic action in some cases. Prof. Lepine, however, asks if it be not possible to continue its use with the aid of certain precautions.

Consulting those authors whose authority is the most unquestioned, we see that they prescribe nitrate of aconitine crystals in the dose of 2 to 3, and even 4, milligrammes per diem.

And yet this medicament is really dangerous for several reasons. First, there is very little margin between the therapeutically active and the dangerous dose of nitrate of aconitine, so that one runs the risk of the supervention of serious accidents from a dose very little beyond that which is required for curative action. In the second place, the dangerous dose varies greatly with different subjects. Indeed, says M. Lepine, there are exceptions which cannot possibly be foreseen—special susceptibilities which it is impossible to suspect. The inference is that practitioners should be very prudent in the employment of the remedy, and that it is wise to hold fast to small doses. If they do not prove sufficient, it is better to forego the use of the remedy.

Correspondence.

INTERNATIONAL PERIODICAL CONGRESS OF GYNÆCOLOGY AND OBSTETRICS.

The Belgian Society of Gynæcology and Obstetrics, under the patronage of the Belgian Government, has taken the initiative in organizing the International Periodical Congress of Gynæcology and Obstetrics, the first session of which will be held in Brussels, September 14 to 19 inclusive, 1892. Three leading questions will be offered for discussion: (1) Pelvic Suppurations; referee, Dr. Paul Segond, Paris. (2) Extra-Uterine Pregnancy; referee, Dr. A. Martin, Berlin. (3) Placenta Prævia; referee, Dr. Berry Hart, Edinburg.

The fee for members participating in first session will be 30 francs (entitling the holder to a copy of the proceedings of the Congress), and for founders (life membership), 300 francs.

In connection with the Congress there will be an international exposition of instruments and appliances pertaining to gynæcology and obstetrics.

All communications pertaining to this Congress should be mailed direct to the American Secretary, who will promptly furnish all information. All notifications to be forwarded should be received by August 1st.

Everything points to a great success in this Congress. Though notices concerning it have been rather late in this country, already men of celebrity have promised to visit and contribute papers. Among the many foreigners who have written to the General Secretary, endorsing and promising support to the undertaking, may be mentioned the following eminent men:

Belgium: De Roubaix, Sacre, Mirriar, Pigeolot, Charles, and Sanpart. *Italy:* Porro, La Torre, Mangiazalli, Bozzi, and Morisain. *Turkey:* Chatazian. *France:* Pean, Demous, Fochier, Auvard, Doleris, Pozzi, Tarnier, Budin, Terrillon, and Terrier. *Holland:* Stokvis, Treub, and Nyhoff. *England:* Lawson Tait, Wm. Priestly, Champneys, G. Elder, J. White, Watt Black, Thornton, Doran, Spencer Wells, and Bantock. *Austria:* Pawlik, Albert, and Chrobuk. *Germany:* Martin, Leopold, Sanger, Gusserow, Veit, Winckel, Hegar, Kaltenbach, Freund, and Heyder. *Finland:* Engstrom, Heinricius, and Pippingohold. *Switzerland:* Reverdin and Vuillet. *Russia:* Slaviansky. *Sweden:* Saliss and Westernark. *Norway:* Statfeldt, Howitz, and Meyer.

Further details will be furnished as soon as received.

F. Henrotin, M. D.,
General Secretary.

353 La Salle Avenue, Chicago.

TEXAS STATE MEDICAL ASSOCIATION.

The twenty-fourth session of this association opened at the Opera House, Tyler, Texas, April 26th, and closed two days later.

The usual reports were presented, addresses, complimentary and practical, were delivered, while the citizens of Tyler vindicated their claim to rank as appreciative entertainers.

Mayor R. B. Long welcomed the association on behalf of the city of Tyler, the Hon. R. B. Hubbard giving greeting in the name of the Tyler citizens.

The reports presented showed the association to be in a healthy and prosperous condition, and its membership was largely added to during the course of the session. The papers read before the various sections were able, and provocative of considerable instructive discussion.

Officers for the present year were elected as follows: President, Dr. J. D. Osborne, of Cleburne; First Vice-President, Dr. T. J. Bell, of Tyler; Second Vice-President, Dr. F. M. Pitts, Jr., of Hubbard City; Third Vice-President, Dr. T. J. Bennett, of Austin.

To fill vacancies on the Judicial Council: Drs. M. T. Emanuel, of Weatherford; J. P. Tucker, of Overton; B. A. Fowler, of Brownwood; A. W. Fly, of Galveston.

Delegates to the American Medical Association: Drs. M. C. Linch, Carrolls Prairie; B. M. Worsham, Austin; C. M. Rosser, Dallas; W. P. Burts and W. A. Duringer, Ft. Worth; M. D. Knox, Hillsboro.

The association adjourned April 28th, to meet again on the first Tuesday in May, 1893.

The Medical Age.

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B. W. PALMER, A. M., M. D., Editor.

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Editorial.

DIVISION OF LABOR IN THE FIELD OF MEDICINE.

The opinion is so frequently expressed that specialism in medicine is to be deplored that it is refreshing to read an ardent defense of specialism from the pen of the judicial Professor William Osler, M.D.

At the meeting of the American Pædiatric Society, Boston, May 2d, Dr. Osler was elected president of this society, and in his remarks on specialism reviewed impartially its advantages and disadvantages, clearly demonstrating that to specialism we owe much of modern progress in medicine.

In comparison with the older countries of Europe, specialism may truly be said to be the most distinctive feature in the medical profession of America.

Medicine may be said to have begun with specialists. The Ebers Papyrus is largely taken up with the consideration of local diseases. Centuries later we find in Greece certain individuals treating special ailments, and Aristophanes satirizes a "rectum specialist" in a way not unlike our comic journals would "poke fun" at an oculist or an aurist. The tail of our emblematic snake has returned into his mouth; at no age has specialism been so rife.

The rapid increase in knowledge has made concentration in work a necessity; specialism is here, and here to stay.

The advantages to the profession that have followed this differentiation have nowhere been more striking than in this country, and the earnest workers in ophthalmology, gynæcology, dermatology, and other branches have contributed largely to inculcate the idea of *thoroughness*, the necessity for which is likely to be lost sight of in the hurry and bustle incident to the growth of a nation. Better work is done all along the line; a shallow diffuseness has given place to the clearness and definiteness that come from accurate study in a limited field.

It is almost unnecessary to remark that the public in which we live and move has not been slow to recognize the advantage of a division of labor in the field of medicine. The desire for expert knowledge is, however, now so general that there is a grave danger lest the family physician should become, in some places, a relic of the past. It must indeed be a comfort to thousands to feel that expert skill is so freely available in the serious emergencies of life.

Specialism is not, however, without disadvantages. A radical error is the failure to recognize that the results of specialized observation are, at best, only partial truths, that require to be correlated with facts obtained by wider study. The various organs, the diseases of which are subdivided for treatment, are not isolated, but complex parts of a complex whole, and every day's experience brings home the truth of the saying: "When one member suffers, all the members suffer with it."

It will be found, however, that this narrowness of vision is not characteristic of all specialists. Scan the lives of, say, twenty of the men most prominent in special lines of medicine and surgery to-day in this country, and you will find, with scarcely an exception, the early years devoted to anatomic, physiologic, or pathologic studies. They rose high because the foundations were deep.

After all, though specialism is rife and has so carved the body of physic that Hippocrates would scarcely recognize it, and though its sounds go out largely and echo in the journal and society reports, nevertheless I would boldly make claim for a wider diffusion of its benefits. Of dwellers in cities arrogance is a special trait, and we discuss problems in a surely-we-are-the-people style, forgetting that outside lie the greater millions equally precious to Æsculapius, and under the care of men that cannot specialize, who must be able to set fractures, perform version, treat iritis as well as fevers, ear-ache as well as itch.

One prospecting to practice as a general practitioner should leave the schools knowing the practical application of the microscope, the ophthalmoscope, and the laryngoscope, and in these and other lines he should have proceeded to the stage in which he recognizes the limitations to his knowledge.

The post-graduate schools have done much to enable men to revive and to acquire technical skill, and have been of great service in generalizing special knowledge. In the practice of a good all-round man the number of cases demanding the help of a specialist is, after all, not very great. The ordinary run of nervous disorders should be recognized; adenoid vegetations should be treated with the skill of the laryngologist; he should know enough not to tinker with a case of glaucoma; and, though he may not differentiate a pus tube from a tubal pregnancy, he should in this, as in other details, have learned to know his limits and be ready to seek advice.

With the revival and extension of education, the benefits of specialism will become more widely diffused, and to this end the efforts of colleges and hospitals should be directed.

SEX IN EDUCATION.

The annual oration at the Medical Society of London was delivered by Sir James Crichton Browne, M.D., LL.D., F.R.S., and was devoted to a demonstration of the radical differences between the sexes in cerebral equipment and capacity for intellectual work.

The orator pointed out that there are organic cerebral differences between men and women, and reasoned from this that they should be educated in different ways. He contended that young women suffer more change and are more unstable, physically and mentally, at the onset of puberty than are boys, and that, therefore, their education should be carefully watched, and not forced.

He advocated the preparation of lessons in the earlier part of the day, and deplored the prolonged evening study, which so often resulted in sleepless nights, loss of appetite, followed by general anæmia.

As to school work, he advised, not promiscuous work and that in excess for the attainment of a non-natural and impossible ideal, but carefully selected and normally graduated work for the harmonious evolution of faculties peculiarly woman's own.

In the address, certain differences between the brains of men and women were pointed out, and it was shown that not only are there variations in the total weights, but there are special differences in the brain constitution; that the woman's grey matter is of less specific gravity and is less developed than that of man, and that, while man's fore-brain is the heavier, woman's hind-brain is relatively increased, this difference pointing to the different class of minds of the two sexes, the man being more reasonable, while the woman is more sensitive or intuitional.

Sir James concludes his address with a strong plea for adopting methods of education for girls less trying to their physique, and with this divergent differentiation of the sexes will come more reciprocal dependence and higher harmony.

It is no question of superiority or inferiority of the one sex to the other. Each is higher; each is lower; together they make up the perfect whole. Separate they are infirm; in union they are strong; in competition they are mutually destructive. It is in the sympathetic accord of the differentiated sexes that human progress can alone be hoped for.

> "He is a half-part of a blessed man,
> Left to be finished by such a she,
> And she a fair divided excellence,
> Whose fulness of perfection lies in him."

And blindness to this complementary relation of the sexes, so patent to Shakespeare, it is that leads wise men—wise, but ignorant or contemptuous of biology—to sanction inter-sexual competition in education and for subsistence with its ruinous effects. Men and women are constitutionally adapted to do different work in the world. To set them to do the same work is wasteful, and detrimental to the sex that is less adapted to it. It is impossible to contemplate with complacency some of the experiments in this direction which are being carried out, and it is impossible to speculate, from a medical point of view, without apprehension what the outcome of such experiments may be, or

what high-school and college education may do for the country in a few generations, if pushed on with relentless zeal.

THE PHYSIOLOGY OF DREAMS.

Dr. B. W. Richardson recently delivered a lecture on this subject, which is reported in the London Lancet. The phenomena of dreams were first discussed, and were classified under three heads. There are dreams which are entirely objective, brought about by the effect or effects of some external object or action—an external vibration acting upon the corporeal vibratorium.

There are subjective dreams, dependent on some vibration occurring within the body itself and carried by nervous conduction to the sensorium.

And there are, thirdly, dreams due to a combination of the objective and subjective influences.

These different kinds of dreams the lecturer defined from particulars which he, from his long experience in professional life, had noted down, and many details of a most interesting character were thus supplied. The dreams of fever, of indigestion, of exhaustion, of pain, of melancholy, of fear, of contention, of motion, of narcotism from inhaling different gases and vapors, and of circumstantial reasoning in sleep, were noticed and exemplified, the evidence in each case being to the effect that an external or internal influence was sustaining by vibration the condition of dream, and that such condition differed only from the waking dream in that it was less perfect and complete.

In the second division of his discourse Dr. Richardson dealt with causes of dreams, in which he maintained that a dream is a purely physical phase of life; that it depends on two conditions—our own corporeal organization and the state, for a time, of the surroundings of our life. There is no more of mystery, of potency, of prescience, in the dream of sleep than there is in the dream of the wakeful day. We dream according to our nature, our habit, and our environment. Dream is a partial mental activity combined with a more or less complete physical repose.

In illustrating this part of his subject, Dr. Richardson, from a series of beautiful plates, showed the parts of the nervous system directly or indirectly concerned in dreaming. Three of these, of the organic nervous system, were direct photographs from natural parts; another was from an original plate of Vesalius, rendering that great anatomist's view of the pneumogastric nerve in its course from the brain to the heart and stomach; and another still, showing the arterial skeleton, was from the famous drawing by Albinus. The mode in which vibrations could be carried from the external world, through the senses, to the sensorium, and from the viscera to the same centre, was in this manner delineated, and the cause of the objective and of the subjective dream made clear.

BAD AIR IN THEATRES.

In an article dealing with this subject in the June number of the Engineering Magazine, C. S. Montgomery says, *inter alia:* It is alleged on scientific authority, and seems quite worthy of belief, that the air of theatres is the worst that is breathed, except in mines, for there are no other buildings into which people are so closely crowded for hours at a time. With the introduction of electricity a new system in ventilation has been made possible, and this has had its initial and successful trial in the New York Music-Hall. The Music-Hall system may be set forth briefly, as follows: Air is taken in through a brick shaft seventy feet square and extending to the roof. Where it enters the building it passes over racks that can be filled with ice in summer, then crosses steam-coils, divided into sections, each with its separate system of valves; therefore, in cold weather they can be used singly or together, according as the quantity of heat desired is great or little. The pumping force is supplied by four blowers, two of them six feet in diameter, the others of seven feet, each blower being driven by its own engine. There are two main distributing ducts in the basement, each with twenty-four square feet area and made of iron, that carry the air into a system of smaller ducts built into the walls and that have their outlet in a perforated ceiling. This plan secures perfect ventilation, without draught.

Notes and News

Clubs of Medical Men for Social Purposes.—

Chicago has its Practitioners' Club for social purposes, and in Philadelphia it is proposed to establish one, restricted in its membership to members in good standing in the regular profession of medicine. A modest club-house is to be secured in a central location, to be fitted up with chess-tables, billiard-tables, etc., where meetings can be held, committees have accommodations, and members may congregate for social intercourse. A reading-room is to be opened, where may be kept on file the principal medical journals, the literary magazines, and journals of the day. It is contemplated to have occasional (monthly or bi-monthly) dinners, to which non-members of eminence may be invited. The fees and dues are to be moderate, $10 initiation at present, and annual dues of $10.

Those who may feel interested in the formation of such an association, and who may wish to be present at a general meeting for the purpose of organization, are invited to communicate at an early day with Dr. Lemuel J. Deal, 2119 Howard Street, Philadelphia.

The Philadelphia College of Physicians' Banquet.—

A banquet was given by the College of Physicians of Philadelphia on Saturday, April 30th, on the conclusion of which each member drank from the loving-cup to the memory of the late D. Hayes Agnew. Dr. Horatio C. Wood, on behalf of the medical profession of Philadelphia, formally presented to the college a fine portrait of Dr. Alfred Stillé, a former president of the college. The portrait was received by the President, Dr. S. Weir Mitchell. Dr. Mitchell, in his own behalf, presented a portrait of Dr. Oliver Wendell Holmes, accompanying the presentation with a poem. Dr. J. K. Mitchell read a reply in verse sent by Dr. Holmes, who was unable to be present. The portrait was received by the Vice-President, Dr. J. M. Da Costa, who paid an eloquent tribute to the original of the portrait and to the donor. The exercises also included an address by Dr. J. W. Holland, on "The College;" one by Dr. William H. Welch, of Baltimore, on "Associate Fellows," and one by Mr. Talcott Williams, on "The Patient."—*Medical News.*

Illegitimacy in Europe.—

The table of statistics of illegitimacy in Europe shows that Ireland stands at the head of the list with the lowest rate of all the European countries—viz., a rate of 26 illegitimate births in every 1,000. The English rate is 48 per 1,000, and the Scotch no less than 82 per 1,000. Thus we may roughly say that for every child born out of wedlock in Ireland two are born in England and three in Scotland. Looking again at the European table, we find that Ireland is closely followed in her place of honor by Russia, with the low rate of 28 per 1,000, and by Holland, with the rate of 32 per 1,000. The Italian and French rates of illegitimacy are respectively 74 and 82 per 1,000, being thus considerably in excess of England, and comparable rather to Scotland. Among the countries that show the highest proportion of illegitimacy are Sweden, Saxony, Bavaria, and Austria, in which the rates range from 100 to 140 per 1,000. Austria is at the opposite pole from Ireland, and takes the lowest place among the European nations, with a rate of 146 per 1,000.—*The Lancet.*

The Medical College Graduation Fee.—

The Medical News, in commenting on the payment of this fee, says: The graduation fee is indefensible on grounds of justice. After a student has paid his tuition fees for three or four years, fulfilled his duties, passed his examinations, and in every way complied with the regulations and legitimate demands of his *alma mater*, the likelihood of his thinking the *mater* decidedly *dura* will be increased by her demand for $30 or $40 before she will certify to the fact of his completed course of study. Would it not be better to put the tuition fees properly high, let every charge rest upon a real excuse and reason, charge for diplomas and the public hall at cost, and not as at present from 100 or 200 hard-pressed and unwilling men extract $2,000 or $6,000 for reasons that will not bear frank discussion?

An Edinburg Surgeon a Successful Novelist.—

One of the most brilliant of modern novelists is Dr. Conan Doyle, an Edinburg surgeon who has given up the art of medicine for the art of writing. One of his successful characters is that of an astute detective, the prototype of whom was a Professor of Medicine at the University. This gentleman would go into his patients' waiting-room with a face like an Indian, and diagnose the cases as they came in before they had opened their mouths. He would tell them their symptoms, he would give them details of their lives, and he would hardly ever make a mistake.—*Medical Record.*

Astral Conception.—

In the New York Medical Times is reported a curious case. An Italian duke visiting America was absent for nearly two years. On his return to Rome the duchess, his wife, presented him with a child. The duchess is now trying to convince the law courts that the boy is her husband's son, and, being a follower of the cult inaugurated by Mme. Blavatsky, has accounted for what she is pleased to call the "phenomenon" by references to astral bodies and spiritual unions, which are sorely puzzling her judges as well as her husband.

Desirable Funeral Reform.—

As an indication of the increasing attention paid to matters of funeral reform, it is satisfactory to note that at the obsequies of Sir James Allport the mourners, by special request of the deceased, did not uncover their heads beside the grave.—*The Lancet.*

The Doctor Above the Common Herd.—

According to Robert Louis Stevenson, "there are men and classes of men that stand above the common herd; the soldier, the sailor, and the shepherd not infrequently; the artist rarely; rarer still the clergyman; the physician almost as a rule."

Railroad Rates to Detroit for the A. M. A.—

It is announced that both the Michigan and Central Traffic Associations have granted a one-fare rate to Detroit and return for the occasion of the meeting of the American Medical Association.

Therapeutic Brevities.

Pityriasis Versicolor.—Héricourt reports in Progrès Médical that he has for years had extraordinary success in this disease, with embrocations of ol. terebinth.

In pityriasis versicolor usually a single application suffices, after thoroughly cleansing the skin with soap and energetically disinfecting the patient's garments. Observing these directions, the author anticipates no recurrence of the disease.

In herpes tonsurans at most three applications suffice to accomplish a cure in ten days. Slight friction with oil of turpentine, which would not redden a healthy skin, is enough, in the presence of parasites, to develop a lively red color. A thin scaly crust is formed which falls off in a few days. The frictions with ol. terebinth. are to be continued until the skin ceases to react.

In pityriasis of the hairy scalp, turpentine also proves very useful.

Hiccoughs Cured by Pressure upon the Supra-Orbital Nerves.—A. M. Belt, M. D., in Medical Record, reports the following case:

W. L., when wrestling on March 24th, was thrown, striking his head against a wall. The following morning he consulted a doctor with regard to his fallen palate. In the afternoon hiccoughs commenced and continued six days, when I was sent for. I found the man hiccoughing twelve to fifteen times per minute, with a forlorn and worn-out expression of countenance. As there was quite an array of medicine near by, instead of giving a prescription I applied my thumbs to the supra-orbital nerves, and within three minutes the hiccoughs were completely checked. They returned fifteen hours afterward, when pressure was again applied and the hiccoughs were suppressed for nine hours. The third and last time pressure was applied the hiccoughs disappeared to return no more.

Bismuth Subnitrate as a Dressing for the Umbilical Cord.—Stuart (Philadelphia Medical News) recommends a piece of lint, with a hole just small enough to permit the cord to be passed through it, be applied and pushed down to the abdomen, the belly wall around the cord having been previously dusted with subnitrate of bismuth; bismuth enough to completely bury the cord is applied, the lint is folded over smoothly and the binder applied. The advantages claimed for this method are that the application only has to be made once, as the parts need not be disturbed till the cord drops off. The

method is absolutely safe and quite cleanly, the cord drops off more speedily than by any other method, and the resulting cicatrix is firmer and better.

Irrigation without Catheter in Posterior Urethritis.—In order to escape the irritation which accompanies catheterization Dr. Rona (Memorabilien, January, 1892) employs an irrigator furnished with a hard-rubber nozzle to wash out the whole urethra in urethritis gonorrhoica totalis. With a syringe it is very difficult to throw fluid into the bladder, while with an irrigator, placed at the height of one and a half meters, the compressor is overcome, as a rule, in from a few seconds to a minute, especially if the patient's attention is distracted by conversation. The quantity of medicated liquid to be introduced is about a hundred to a hundred and fifty grammes.

A Successful Treatment of Scarlet Fever.—Dr. Vidal (Medicinische Neuigkeiten) has used liquor ammonii acetici in large doses with good results in the treatment of scarlet fever. He advises as a dose one gramme for each year of the patient's age, yet, in adults, thirty-five grammes (one and a fourth ounces) must not be exceeded. It may be administered in elder-flower infusion. This remedy rapidly reduces the temperature, especially when employed early. It is an extremely useful remedy in any eruptive fever.

Enlarged Prostate.—Give five- to ten-grain doses of muriate of ammonia three times a day.

℞ Ammonii chloridi, ʒ ss.
Syr. aurant. cort., ʒ iv.

M. Sig.—A teaspoonful in half a glass of water, t. i. d.

You will be surprised at the results obtained if you will continue the treatment as long as three months. The patient will be grateful in the historical way.—*Clinique.*

Syrup of Bananas in Chronic Bronchitis.—For chronic bronchitis, with scanty expectoration, the use of banana juice has been recommended. The juice is prepared by cutting up the bananas in small pieces, and putting them, with plenty of sugar, in a closed glass jar. The latter is then placed in cold water, which is gradually made to boil. When the boiling point is reached, the process is complete. Of the syrup so made a teaspoonful every hour is the proper dose. —*American Druggist.*

A Note of Warning.—As bromide of strontium seems to be destined to displace the bromide of potassium, our readers should insist on having the chemically pure salts (Paraf-Javal) dispensed, or the standard solution (one gramme to the ounce), so as to avoid further accidents, as toxic effects have been caused by the dispensing of impure strontium salts, the poisonous barium being a concomitant of the strontium preparations of commerce.

Rhus Aromatica in Diabetes.—Rhus aromatica is an astringent diuretic, and will many times cure what is believed to be an incurable diabetes. The amount of urine is steadily decreased, the inordinate thirst is relieved, and every function of the body is thereby bettered. It is the remedy for hæmorrhage from either the kidneys or bladder. When the child is constantly wetting the bed, rhus aromatica will often cure where all other remedies have failed.

Osmic Acid in Goitre.—Auerbach (Deutsche med. Wochenschrift) employs osmic acid, in parenchymatous injections, in the treatment of goitre. He uses five milligrammes at a dose, and follows the injection up by a massage of fifteen minutes' duration. After three weeks he could observe a diminution of one-half in the size of the tumor and the disappearance of the subjective symptoms.

An Application for Freckles.—Morrow (L'Union médicale) recommends application three or four times daily to the freckles of:

℞ Ac. carbolic, } ää 4.0.
Ac. tannic, }
Tr. iod., 8.0.
Vaselin, 120.

Dressing for Burns.—The following is an excellent dressing for burns:

℞ Campho-phenique, ʒ j.
Lanolin,
Ung. aquæ rosæ, ää ʒ j.

M. Sig.—Apply two or three times a day.

—*Weekly Medical Review.*

A Novel Spittoon for Consumptives.—The latest thing in spittoons for consumptives is a pocket arrangement, made of cardboard, in the shape of a cigar-case. The cost of it is only about three and one-half cents, and it is intended to be burned when full.—*Medical Record.*

Medical Progress.

ANÆMIA: ITS TREATMENT WITH A NEW PREPARATION OF IRON.—In giving iron we have, up to this time, been hindered by certain apparently insurmountable difficulties. The organic salts of iron have had but a limited use, owing to their comparative inefficacy. The inorganic salts of iron have hitherto presented many disadvantages. Blaud's pills, so much lauded and popularized by Niemeyer, certainly fail in a considerable number of cases. Notwithstanding the large amount of iron which one can administer in them, in many instances improvement does not follow their prolonged and uninterrupted administration. I am inclined to think that the potash is partly responsible for this, since it is, as we all know, one of the agents that promote waste. The tincture of the chloride of iron has easily held the first place in popularity and efficiency. Combined with phosphoric acid, when well borne by the stomach, its therapeusis is unassailable. The formula of Flint has been for many years one of my favorites. A coated tongue, feeble digestion, and constipation are supposed to contra-indicate the use of iron. I should rather say that these conditions called for a previous purgation and correction of the digestion, preliminary to a course of ferruginous treatment. On the other hand, I am quite as strongly opposed to the administration of a laxative at the same time with iron, such as is frequently found in its association with aloes, because the metal, being slowly absorbed, requires a slow passage along the intestine. I believe that there is no doubt that large doses of iron are less constipating than small ones, but I do not believe that the final result—namely, the absorption—is so satisfactory. Iron is absorbed more rapidly in catarrhal conditions of the alimentary tract, and in those cases tends to accumulate in the liver. Castellino has found, in his experiments, that hæmoglobin is absorbed rapidly, is always well borne, increases the number of red cells and the specific gravity of the blood, and improves the general condition. If the administration of hæmoglobin, however, is stopped before the normal condition is reached, its effect is only fugitive. In secondary anæmia it fails completely, in that its effects are only transitory. It is more rapid in its action than any other iron preparation. Obviously, the use of this preparation will be extremely limited. The iron found in wines is too small in amount to be considered, yet I am in the habit of prescribing wines, and especially Schreiber's dietetic Tokay, for my patients.

Since, then, we are of the opinion that iron is our sheet-anchor in the treatment of anæmia, and since all preparations hitherto used either have been inefficient or have presented certain disadvantages, we come now to a consideration of a preparation which, I think there is no reliable doubt, will revolutionize the treatment of anæmia, in that the objections to the strong preparations have been done away with. Dr. George W. Weld, of New York, realizing the great injury done to the teeth by the tincture of the chloride of iron, set about obtaining a preparation which, while retaining all the therapeutic effects, should present none of the disadvantages. After years of experimentation, this preparation has been put on the market by Parke, Davis & Co., under the name of Weld's syrup of chloride of iron. It was found with the official tincture that the acid would attack the enamel of the teeth, and, curiously enough, in Smith's experiments, when two drachms of the tincture were added to an ounce of water, the destructive energy upon the calcium salts of the teeth was increased, and it was found that, of iron preparations, the chloride was the most harmful, the syrup next, and the wine the least of all. Other preparations of iron, which are bland, are by no means so valuable as the tincture of the the chloride of iron. I have tested clinically all the albuminates and peptonates of iron, and all are objectionable because, on the one hand, they are inefficient, frequently requiring administration for many months, and, in the second place, they give rise to extremely bad-smelling flatus. If you add water to a simple solution of iron chloride, which is devoid of other acid, you get the basic salts of iron in free hydrochloric acid. Weld has shown that these basic salts of iron are not soluble in strong acids, so that they protect the teeth in the same way that alcohol and syrup do; when, however, water is added, these salts are dissolved, and the acid then attacks the enamel. Thus it is seen that it is the free hydrochloric acid that is so destructive to the teeth. In Weld's iron this excess of acid, which is unnecessary for perfect solution of the iron salt, is removed, and in no way does this impair the therapeutic value of the preparation, because the hydrochloric acid is again added to it from the gastric fluids. It is easily assimilated; better tolerated than the old tincture of the chloride, because it does not produce nausea; gives rise to no disagreeable eructations; and contains no alcohol save that which is found in the tincture, of which half an ounce contains

only twenty drops. The constipation which is noticeable on the use of all iron preparations is easily corrected by equal parts of fluid extract of cascara sagrada and glycerin, the proper dose to be determined by experiment.

Each fluidounce of Weld's syrup of the chloride of iron contains forty drops, equaling twenty-four minims, of the tincture of the chloride of iron of the United States Pharmacopœia. It is not pretended that Weld's syrup will not stain the teeth; soft-boiled eggs, salads, etc., will of themselves stain the teeth, but it can be asserted that Weld's syrup will not injure the enamel of the teeth. On using a tooth-brush, the surface is always found intact, even after month-long immersion in this preparation. Weld's syrup of the chloride of iron is simply the tincture of the chloride of iron, United States Pharmacopœia, with the excess of acid neutralized and a certain amount of syrup of gaultheria added to improve the taste.

[Then follow detailed histories of twelve cases.]

In making an analysis of these cases, we may say that the cause of the anæmia in Case 1 was a state of malnutrition following diabetes and arising in the liver. Cases 2, 8, and 12 evidently became anæmic through overwork, loss of fresh air and sunlight. Case 4 is accounted for by the menorrhagia from which she suffered, and which was cured during the last week of observation by curetting of the uterus under ether; her improvement, however, dated from the commencement of the treatment by iron. Dyspepsia evidently was the cause of the anæmia in Case 3, which could well be named as one of Sir Andrew Clark's fæcal anæmias. I believe that the cure was obtained quite as readily with the administration of iron as it would have been with beta-naphthol, and I speak after considerable experimentation with intestinal antiseptics. Case 10 developed her usual spring chorea while under treatment, yet the attack was mild and improved rapidly. Case 5 was a tea fiend, and a great portion of the result could be justly assigned to the breaking off of the habit. Cases 6, 9, and 11 were of the tubercular diathesis, and Case 7 should be added here, as the condition was one of hypertrophy, such as has recently been described by Solis-Cohen. Iron, when change of life, scene, and habit can be obtained, is certainly a most valuable prophylactic. In all these cases outdoor exercise was insisted upon, for iron to be of the most value must be sunned, regular hours for sleep and meals and a nitrogenous diet prescribed, and the bowels regulated by cascara sagrada and glycerin.

Conclusions.—1. In anæmia iron is by far the best remedy.

2. Of all preparations, the tincture of the chloride is the most valuable.

3. This preparation is objectionable in that it excites nausea, disgust, and vomiting, staining and destroying the teeth.

4. These disadvantages are obviated in Weld's syrup of the chloride of iron.

5. In removing these disadvantages, its therapeutic efficacy is not in any way impaired.—Abstract of paper read by R. W. Wilcox, M. D., before the Section in General Medicine, New York Academy of Medicine.

Mistletoe as an Oxytocic.—Dr. W. H. Long, of the U. S. Marine-Hospital Service, in New Preparations, in 1878, claimed for mistletoe, as compared with ergot, for oxytocic purposes—first, that it acts more promptly and surely; secondly, that it produces intermittent uterine contractions, as opposed to tonic contractions, and for this reason it may be used in any stage of labor or in primiparæ. These claims he bases on an "extensive experience of its use between the years 1867 and 1878," and such was his uniform success with it in "hundreds of cases," that he reports, to use his own words: "It acts with so much more promptness and certainty than ergot that I have been using it exclusively for years." With equal earnestness Dr. Long also advocates the use of mistletoe in menorrhagia and post-partum hæmorrhage and in hæmoptysis.

A drug that could be depended upon to induce with certainty intermittent uterine action would prove a boon to the obstetrician, not only in cases in which the induction of labor was indicated, but also, and more particularly, when pains are absent at term or have ceased from atonicity of the uterus. I am induced to report my own limited experience of mistletoe in the hope that further trials and reports of it may be made.

Mrs. J. B. A., thirty-six years old, had a history of eight abortions and miscarriages—the last at eight months, the remainder dating between the third and the sixth month. The patient first came under my care at third month of gestation, and was with difficulty carried to full term, her pregnancy being complicated by frequent attacks of cardiac asthma and a prolonged siege of general peritonitis brought on by rupture of adhesions due to old pelvic inflammation. She gave, further, a history of protracted

labors, with profuse and persistent post-partum hæmorrhages, not only in the premature birth, but also in all the abortions and miscarriages. In her own words, "her pains always died out," and artificial aids to delivery had to be employed. The child at eight months was born only after a week of interrupted labor, and then was "removed;" and I gather that ergot was freely used in this instance.

In her last labor, the outcome of which was a well-nourished and healthy six-and-a-half-pound girl, I made use of mistletoe, using the fluid extract in one-drachm doses at intervals of twenty minutes for four doses. The circumstances and nature of the case were such that I deem it quite a crucial test of the drug. During my absence in another part of the State her labor began, and, according to her own statement, the pains were the strongest she had ever felt; they, however, only persisted for from twelve to fifteen hours. On my return, five days later, I found her utterly devoid of pains, the os dilated to the size of a half-dollar, soft, and non-resistant. On introducing two fingers, which were readily admitted, I made out a normal L. O. A. position. After waiting for two weeks for a renewal of pains, which I was unable to induce either by uterine compression, digital dilatation of the os, or suppositories of quinine, belladonna, and strychnine, I determined to make a trial of mistletoe, of which I had secured a specimen of the fluid extract with a view to its possible use in this case. Twenty minutes after exhibition of the first dose I was gratified by the commencement of excellent dilating pains, and, giving the second dose, I returned to my office for my satchel. Half an hour later, on my return to my patient, I found the labor progressing most satisfactorily. I gave the other two doses at irregular intervals, when the pains seemed to become a little irregular and less strong, but more as a preventive than because imperatively needed. In a little over five hours after giving the first dose of mistletoe the labor, which had been characterized by typically normal uterine action both as to strength and regularity, was terminated, the third stage being ended by the pain which followed the expulsion of the child. The uterus contracted firmly and promptly, with virtually no hæmorrhage.

In this case delivery was almost entirely dependent upon uterine action alone, the condition of her heart making sustained abdominal effort impossible—a condition which, I felt convinced, would have led to a fatal termination had the labor been unduly prolonged, there being a double mitral lesion and marked enlargement, and, I think, failing compensation. The fact of her being so entirely dependent upon unassisted uterine action, I think, adds evidence to the character of the pains induced.

The following case in evidence of the action of mistletoe as an oxytocic I am enabled to report through the courtesy of my friend, Dr. C. D. Kunkel, in whose practice it lately occurred:

X., non-pregnant, was prescribed teaspoonful doses of the following mixture at four-hour intervals: Ext. pichi fl., f ℥ iijss; ext. mistletoe fl., f ℥ jss. After taking four doses, containing seventy-two minims of mistletoe, she sent for Dr. Kunkel, complaining of violent "cramps," which, upon investigation and careful examination, were found to be due to characteristic "labor" pains. These pains persisted for from four to six hours, and were strong and regular. The drug had been given on account of its antispasmodic properties, with pichi, in a case of cystitis with violent tenesmus.—Dr. Hamilton P. Howard, in *Medical News*.

Obesity.—Among the ailments to which flesh is heir, there are few which render an individual more uncomfortable and anxious for relief than a superabundance of fat. Not being accompanied by the usual manifestations of disease, such as pain, loss of sleep and appetite, and not depriving the individual of the customary means of enjoyment, this trouble is, as a rule, not regarded as a subject for treatment until it threatens to destroy the symmetry of the body, or becomes an impediment to comfortable locomotion. As in the case of all other ailments, an early resort to treatment would not necessitate the radical measures which become imperative when the condition is well advanced.

Especially in young people should steps be taken to divert the abnormal nutritive condition into the proper channel.

In the Dietetic Gazette, May, 1892, Dr. Paul Cheron presents a fair résumé of the best methods of managing this troublesome condition, which will enable the physician to cull the method best adapted to each case. The hot-air bath, especially the box bath, in which the air inhaled is not expanded by heat and rendered impure by lack of ventilators, as it is in the Turkish bath establishments, followed by gradually cooling douches under good pressure (20 to 30 pounds), and terminated by a spray or jet douche of low temperature (50° to 60°), has proved an

effective auxiliary in increasing tissue change in the right direction.

The arm exercises, as described by Cheron, while standing erect against a straight wall, are another valuable measure, too little practiced. It should be executed in a well ventilated room or in the open air.

The consumption of large quantities of green vegetables acts as a fodder to satisfy the palate and satiate the appetite without furnishing nutritive material.

The use of tea and coffee, as advised by Germain Sée, proved an excellent denutritive agent, which must, however, be avoided in the erethetic, excitable obese. It is invaluable in sluggish and plethoric individuals who are fond of and indulge in siestas, because it counteracts the latter tendency. Except in the obese suffering from certain cardiac troubles, the deprivation of water, which has become so empirically universal since Oertel's treatment was published, is a needless cruelty. Indeed, in some subjects, such as the rheumatic and gouty, the free use of water is an absolute advantage, because it assists the exchanges and aids in freeing the patient of uric acid deposits that impair his movements and render him unfit or disinclined to exercise. A careful study of all the elements of each case, and an insistance upon the methodical execution of the physician's directions, will amply compensate the doctor and patient. To advise a patient to abstain from starchy and farinaceous food, to exercise a great deal, and drink no water, without minutely entering upon methodical directions, invariably leads to failure and dissatisfaction. If we expect the patient to obey directions, the latter must be made as little irksome as is consistent with thorough treatment.

There is no reason why the obese may not be made comfortable and content, if their predilections are regarded, and the restrictions placed upon their habits and customary mode of life are ordered with care, judgment, and sympathy. The physician needs to learn the maxim, "Put yourself in his place," when prescribing for an individual who is not bed-ridden, but as capable of enjoying the pleasures and comforts of life as himself.—*Dietetic Gazette.*

THE TREATMENT OF BURNS BY EUROPHEN. —Dr. Siebel (Berlin. klin. Wochenschr., No. 8, 1892) speaks as follows on this subject:

I have employed europhen for almost one year in the treatment of burns and injuries resulting from corrosive substances, which, as is well known, form the main contingent of accidents at chemical manufactories, and have been for some time past treated almost exclusively with iodoform.

I will not weary you with the histories of cases, for none of them were of an unusual character; but will content myself with the statement that I have treated, with equally good results, about thirty patients suffering from burns and the effect of caustics, from the slightest forms to the third degree, and arising from all sorts of injurious agents (as, for example, hot soda lye, boiling glycerin, sulphuric or hydrochloric acid, burning alcohol).

At first I applied the europhen in the same manner that it is customary to use iodoform, that is, after cleansing the parts, opening the bullæ, etc., I covered the burned places lightly with europhen powder, then applied a dressing of sterilized gauze and cotton, and fixed this with bandages. If the burned areas were extensive or could not be readily covered with the powder, I dressed the wounds with 10-per-cent. europhen gauze, renewing the dressing as often as was necessary. Under this treatment exuberant granulations were formed, and the cicatrix was firm, yet elastic. The only disadvantage of this dressing was occasionally observed in the firm agglutination of the gauze to the wound, and this could not be completely obviated by interposing a layer of gutta percha paper. In consequence of this adhesion, the exuberant granulations were frequently torn on renewal of the dressings, and slight hæmorrhages produced.

To avoid this disagreeable feature I made use of europhen in the form of ointments, and at first of a 10-per-cent. ointment. As the latter, however, produced irritation in some instances, and in one case a slight eczema, I diminished its strength, and finally adopted a 3-per-cent. ointment of europhen with vaselin and lanolin (europhen, 3.0; ol. oliv., 7.0; add vaselin, 60.0; lanolin, 30.0). I obtained the best results from this ointment, and what was especially remarkable was the marked diminution of the secretions. Owing to the latter effect it was found possible to leave the dressings in place for three or four days, and to renew them easily and without pain (many patients were enabled to continue work under the use of a starch dressing). Several burns of the third degree healed completely after three or four dressings. The longest period of healing (twenty-two days) was observed in a case of severe injury from hydrochloric acid, extending from the elbow to the wrist over a breadth of 5 centimeters. It should also be noted that the europhen ointment relieved the

pains from the moment it was applied to the burns. Unfavorable effects or symptoms of poisoning have been never observed by me, aside from the irritation produced by the stronger ointments. In children europhen can also be employed without risk, since it may be regarded as innocuous, at least in the doses which obtain here. I have myself taken internally for a period of three weeks from 6 to 8 grammes of a 20-per-cent. solution in oil every day, that is about 1½ grammes of europhen daily, without experiencing the slightest discomfort, or even as much as an impairment of appetite.

On the ground of these observations I would highly recommend the 3-per-cent. europhen ointment in burns of all degrees of severity. The results are better than from the use of iodoform, and, besides the absence of all disagreeable odor, there is no danger of the toxic effects which, although fortunately rare, are sometimes observed from the application of iodoform.

Notes on the New Analgesics and Antipyretics.—Dr. Squibb, in his *Ephemeris*, makes these notes upon some of the popular analgesics:

Acetanilid (antifebrin) has lost much of late of its vaunted reputation, on account of its impurity. Toxic effects have been unexpectedly produced from even fairly moderate doses, although prescribers seem to differ very considerably in what they consider the proper dose. Its apparently marked antipyretic properties with which it started out are less relied upon than formerly. Its good effects are to be found in its analgesic and hypnotic action. Its results have been harmful in some cases of typhoid fever, especially in pregnant and nursing women. Good results are to be looked for in neurotic affections, such as lumbago, neuralgias, severe rheumatic pains, sciatica, and the like. However, it appears to be safe and useful as a hypnotic in children, especially when affected with bronchitis or croupous pneumonia. Its comparative insolubility, and thus tastelessness, together with the smallness of dose, recommend it strongly in these cases. It may be well administered by placing the drug itself, or mixed with a little sugar, well back on the tongue, rather than attempt to improvise some mixture. Notwithstanding conflicting results, this article has come to stay, and has recently been added to the British Pharmacopœia. No doubt the revisers of our own Pharmacopœia, now at work, will also give it attention.

Anæsthesin, synthetically prepared, was exhibited at the last International Medical Congress in Berlin. Messrs. Gehe & Co., since then, claim this to be bromacetanilid. It was a white crystalline powder, offered as a rival to cocaine in local anæsthesia. Little has been heard from it or about it since that time, and therefore we have little professional interest in it as yet.

Antikamnia, the new "analgesic, antipyretic, and anodyne," proves, upon careful analysis, to be nothing more than a mechanical mixture of acetanilid and commercial bicarbonate of sodium rubbed up into a fine powder. Its therapeutic effects have been good, but only to the same extent as acetanilid itself, with the noticeable advantage, however, of acting more quickly and in smaller doses, due, no doubt, to the presence of the bicarbonate of sodium. Under the above circumstances, then, it would be far better to extemporize a prescription of about seventy-five per cent. of acetanilid, and pay about one-tenth the price the leading firm exacts.

Antinervin was introduced into medicine a couple of years ago as being analytically salicylbromanilid, and similar in its effects to acetanilid, with its accompanying disadvantages. Its recommended efficiency in diabetes has not been verified, and we hear little of it professionally. It may be of interest, however, to learn that, from a careful examination, it is now concluded to consist of 50 parts acetanilid, 25 parts salicylic acid, and 25 parts bromide of ammonium.

Antipyrin has lost very little of its popularity during the past year, but the profession has been gradually learning to use it with caution. Several very trying poisoning cases, with some deaths, have occurred from its use, even after moderate doses; but the larger proportion, undoubtedly, were not entirely due to the antipyrin.

Phenacetin has justly grown in favor during the past year. It had a slight set-back at one time, due to a poisoning case, but it was finally found that it had been mixed with acetanilid for commercial gain, as the prices of the two vary considerably. It has now become official in the British Pharmacopœia.

Pilocarpine Nitrate in Facial Erysipelas.—Perhaps none of the common diseases with which the general practitioner is daily compelled to grapple causes him more perplexity and embarrassment, as it continues to advance in spite of scientific therapeusis, than that well-named ancient and modern "Fire Erysipelas." The affection is especially indigenous to this locality and State [Pennsylva-

nia],and from quite an extensive acquaintance with it in patients of all ages, I feel it a duty to record the satisfactory results obtained from the use of pilocarpine nitrate administered hypodermatically in aqueous solution, in doses of from one-fortieth of a grain for infants to half a grain for adults—the dose at all events being sufficient to maintain a steady appreciable diaphoresis; stimulants being given at the same time, as required. In submitting my experience with this remedy I am neither unduly enthusiastic nor am I unmindful that in the treatment of erysipelas the great master Trousseau "used no remedies except a laxative, but he pushed the administration of food—which must be done, of course, in all cases—and of the great number of cases treated by him only three died."

Two cases of facial erysipelas in infants—one male, one female—respectively seven and nine months old, with temperature (rectal), when first seen in consultation, of 104° and 105°, cerebro-spinal symptoms, after intelligent treatment by all the usual means, yielded to pilocarpine nitrate in slightly diaphoretic doses, being markedly improved in from twenty to thirty hours and convalescent in a week. The only laxative used was castor oil. In these cases, contrary to my usual experience, we were unable to check the spread of the dermal inflammation. It gradually invaded every inch of skin, even to finger and toe tip; but the advancing line was only of a pale-reddish hue The temperature declined to 100° after the third dose; the infants rested well and nursed again (the breast had been refused and breast milk was administered with a spoon for about thirty hours).

The results of these cases, so unpromising and malignant at first, are entirely consonant with my experience with the remedy in many other cases, and the course of the disease in these cases varies only in the failure to promptly arrest the advancing line of inflammation. I began using jaborandi and pilocarpine after listening to the remarks of my honored instructor, Prof. Da Costa, concerning jaborandi in erysipelas, at a clinic at the Pennsylvania Hospital several years ago, and have not failed to relieve a single case in which the remedy was employed early enough to have had anything like a fair trial.—G. V. Hale, M.D., in *Medical Record.*

Successful Operation for Cerebral Abscess.—Murray (British Medical Journal, No. 1624, p. 333) has reported the case of a girl, five years old, who, fourteen days after having been struck by a poker upon the right side of the head, presented uncontrollable twitching of the left arm and left side of the face. The movements continued for half an hour without loss of consciousness. Two other like attacks occurred on the same day, and another subsequently. The seizures began with shaking of the left arm, followed by movements of the fingers; then the left side of the face became involved, and the eyes rolled about. Progressive loss of power in the left hand was observed after the next attack. The hand became extended at the metacarpo-phalangeal joints and flexed at the interphalangeal joints. Sensation was unimpaired. The temperature was 98°. A small, sloughing scalp wound was found in the right parietal region, in a situation corresponding with the junction of the upper and middle thirds of the fissure of Rolando. Through this wound a probe could be passed into the cranial cavity. Operation having been decided upon, a three-quarters-inch disc of bone was removed at the site of the wound. The dura mater was found to be torn; the cerebral structure was soft and sloughing and without pulsation. A probe introduced entered an abscess cavity, from which a drachm of viscid pus was evacuated. The cavity was irrigated with a 1:5000 mercuric chloride solution; a small piece of sloughing tissue was removed, and a drainage tube was introduced. Pulsation became evident at the end of a week. At the end of two weeks the drainage tube had by gradations been entirely removed. The seizures did not recur. Power returned to the left arm and hand. Bilateral optic neuritis was discovered, but this subsequently disappeared.

Apples as Medicine.—Chemically, the apple is composed of vegetable fibre, albumen, sugar, gum, chlorophyl, malic acid, gallic acid, lime, and much water. Furthermore, the German analysts say that the apple contains a larger percentage of phosphorus than any other fruit or vegetable. The phosphorus is admirably adapted for renewing the essential nervous matter, lecithin, of the brain and spinal cord. It is, perhaps, for the same reason, rudely understood that old Scandinavian traditions represent the apple as the food of the gods, who, when they felt themselves to be growing feeble and infirm, resorted to this fruit for renewing their powers of mind and body. Also, the acids of the apple are of signal use for men of sedentary habits, whose livers are sluggish in action, those acids serving to eliminate from the body noxious matters,

which, if retained, would make the brain heavy and dull, or bring about jaundice or skin eruptions and other allied troubles.

Some such an experience must have led to our custom of taking apple sauce with roast pork, rich goose, and like dishes. The malic acid of ripe apples, either raw or cooked, will neutralize any excess of chalky matter engendered by eating too much meat. It is also the fact that such fresh fruits as the apple, the pear, and the plum, when taken ripe and without sugar, diminish acidity in the stomach, rather than provoke it. Their vegetable sauces and juices are converted into alkaline carbonates, which tend to counteract acidity.

PARISIAN METHODS OF TREATING PNEUMONIA.—Dr. Dujardin-Beaumetz, in a great many cases of pneumonia, uses no remedy whatever, interfering only when complications occur, such as weakness of the cardiac apparatus as the result of the previous infective disease or of alcoholism. In such instances he employs caffeine hypodermatically, not approving of the alcoholic preparations, but regarding coffee, tea, and kola as useful. Against nervous symptoms and delirium he employs chloral, and in alcoholic patients paraldehyd in the dose of 45 grains, but he never uses opium under any circumstances. Blisters are never used by him in the acute stage of the disease. Professor Cornil recommends the use of an antiseptic mouth-wash, and when the local signs of pneumonia are great at the beginning of the disease, orders several wet cups, or resorts to venesection if the pulmonary congestion is severe. He then applies a larger blister and gives a mixture as follows:

℞ Brandy or rum, ℥ iss.
Simple syrup, ℥ j.
Tincture of cinnamon, ʒ j.
Distilled water, ℥ iii.

A tablespoonful of this mixture should be taken as often as necessary to strengthen the pulse. He also orders a little Dover's powder to increase perspiration. Professor Peter thinks that robust and plethoric patients demand the use of venesection and scarifying cups, while the weak and senile must receive cordials, such as the prescription just given, and the bilious must be treated by emetics, such as tartar emetic or antimonium sulphuret, in the dose of from 4 to 5 grains. Most other physicians agree in using as stimulants caffeine, ether, alcohol, and camphor. Digitalis is not much used, nor is hydrotherapy at all popular.—*Therapeutic Gazette.*

HÆMORRHAGE AFTER EXTRACTING TEETH.—In a paper read by Dr. J. E. Entsminger, before the Southern Illinois Dental Society, a number of treatments were suggested for cases of hæmorrhage following the extraction of teeth. There is no cause for any immediate alarm in such cases, he said, and the first thing to be done is to examine a small portion of the blood in a test tube. If it clots readily upon standing a few minutes, that is a good sign, as it shows that the blood is in a favorable condition for itself forming a plug, if it can be kept in the alveolus a sufficient length of time. This should be accomplished by placing a pledget of cotton firmly in the socket from which the tooth was drawn, and bandaging the skin to keep the mouth shut. Plaster-of-paris may be put into the socket and allowed to harden; a vulcanite plate, or plug made of gutta-percha, may be used; or, finally, as a *dernier ressort*, the tooth may be forced back whence it came. These are the mechanical means. For hæmostatics, tannin ranks first, though gallic acid has about the same effect. Either is applied on cotton first moistened with glycerin. Fresh matico leaves, or their dried powder, may be used with good effect, or a solution of alum in water is efficacious, though the latter works an injury to the enamel of the teeth. It is best used with a syringe. The iron salts, once so popular, have been largely discarded because secondary hæmorrhage may result from destruction of the tissues caused by their use. Cautery with a hot iron is one of the most certain treatments. The iron need not be red-hot, only hot enough to coagulate the blood. The electric cautery is a modification of this remedy, which is more elegant though not much more efficacious than another modification, the fire on a burning match.—*Druggists' Circular.*

THE ELECTRICAL CURE OF CANCER.—In the year 1889, and again in 1890, Miss Emily Faithfull had the misfortune to require treatment for epithelial cancer. Both operations were attended by a relapse. When it came time for a third operation the possible utility of electricity was suggested to her. It was tried, and she announces that the result so far has been "absolutely satisfactory." Influenced by this fact the lady has gone to work, and with a good deal of literary skill, if not of critical acumen, she has compiled all the facts she could find bearing on the subject of the treatment of cancer by electricity. Her paper, though published in the Contemporary Review, would be no discredit to a medical journal, except that she seems

to have found in literature only those references which more or less support her view of the probable efficacy of the agent about which she shows so keen an interest. We have carefully read over her quotations, and must confess that, after all, they do not furnish any very definite data.

Modern surgical pathology has reached this conclusion that cancer is a local disease, and that early, extensive, and thorough operation gives, in a good many cases, curative results. This is about all the progress that has been made in the therapeutics of cancer. —*New York Medical Record.*

Preparations of Cannabis Indica in Morphine, Chloral, and Cocaine Abuse. —During the course of a ten-year practice, Dr. J. B. Mattison, of Brooklyn, has often had reason to satisfy himself of the analgesic and hypnotic properties of Indian Hemp. With persons who had abused morphine, chloral, and cocaine, the remedy proved of unquestionable value. As a rule, sleep ensues two hours after the administration of the remedy, and is calm and sound. The author never observed secondary, dangerous phenomena, but, on the other hand, he did notice some cases of intoxication and one of catalepsy. Dr. Mattison says that the best preparations are the fluid extract of Parke, Davis & Co. and the Cannabin tannate and Cannabinon of Merck. The doses are: Tincture, 20 to 40 drops; fluid extract, 5 to 20 drops; common extract, 0.03 to 0.12; Cannabin tannate, 0.3–0.9; Cannabinon, 0.03–0.09. If necessary, the dose is increased or repeated until the effect is obtained. Cannabinon is said to act twice as powerfully upon women as upon men. In periodic and inveterate cephalalgia, Indian Hemp is the best remedy—0.03–0.12 Extract Cannabis every 1–2 hours until the pains disappear, then 2 drops daily for a little time. This medication does not injure the stomach.

Palliative Therapeutics. — The wild search for specifics in medicine, the growing belief in the self-limited character of many diseases, and the disposition to regard most chronic ailments as incurable, have caused physicians of the present generation to almost ignore palliatives in the treatment of disease. How many cases of phthisis, dyspepsia, migraine, chronic rheumatism, and various intractable skin diseases are dismissed with a few perfunctory directions as to diet and careful living.

Unpleasant and unsatisfactory as we all admit the treatment of chronic and incurable disease to be, there is no justification for dismissing these cases as beyond the reach of therapeutic skill. We hold that no form of sickness is ever encountered where something may not be done to render the patient less miserable; but where a practitioner sees only a pathological condition beyond the reach of remedies, or, on the other hand, discovers nothing abnormal by physical exploration, and dismisses the one as incurable and the other as requiring nothing further than "attention to hygiene," with the assurance that "Nature will do the rest," he will be apt to find in a short time that his efforts are not appreciated.

No small amount of patience and skill is required to cater successfully to the woes and whims of chronic invalidism, but we must always remember that chronic disease begets impatience and irritability of temper.

One hour a week earnestly devoted to the subject of palliative therapeutics by the practitioners of this country would be productive of more real comfort and happiness than the discovery of an alleged specific for every day in the year.—*The Practitioners' Monthly.*

Relapse of Strictures of Urethra After Operation.—Strictures of the urethra after all forms of operation are subject to relapse. The choice of the operation is not founded on sufficient anatomical basis, so that the surgeon is forced to let himself be guided by purely theoretical reasons.

Seven cases with treatment by electrolysis are reported, and the following conclusions submitted:

1st. Linear electrolysis is a simple inoffensive operation, rapidly dilates the stricture of the urethra in a general manner.

2d. When electrolysis destroys the tissues of the stricture in the deep urethra, the cure is certain and radical.

3d. Observations show that electrolysis practiced on patients who have already submitted to urethrotomy or to dilatation gives results which are more durable than those furnished by the two operations.

4th. When linear electrolysis is well done the canal has a tendency to dilate spontaneously for a long time after the operation, contrary to that after urethrotomy or dilatation.

5th. One has then the right to affirm that a relapse is less likely to be feared after linear electrolysis than after the other methods of treatment.—J. A. Ford, M. D., in *Répertoire de Thérapeutique.*

The Medical Age.

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Original Articles.

ON THE TREATMENT OF THE INFLUENZAL PNEUMONIAS.*

BY DR. H. HUCHARD.†

Certain pathologists, reasoning from microbiological researches, have affirmed that the influenzal pneumonias do not differ from ordinary fibrinous pneumonia, because in both forms the same pathogenic microbe, the pneumococcus, has been met with. Thereupon we find it stated elsewhere that another microbe, a streptococcus, is frequently found in all the pneumopathies of influenza. We have, next, had to learn that the influenzal infection is often the result of combined microbial associations, and without reckoning the new bacillus of Pfeiffer, a minute bacillus, which is said to be constantly found in the blood of influenza patients (Canon, Pfeiffer, Guttmann), experts have described quite a number of pathogenic microbes—the *streptococcus pyogenes*, the *staphylococcus pyogenes aureus*, and the *pneumococcus*. It is without doubt on this association of microbes that the complex and vexatious pathology of this formidable and singular malady depends. We may derive hints of exceeding value in treatment from the data of the micro-biologists; we may obtain inspiration from their researches, while at the same time we must retain a large measure of independence, taking our stand, as of old, on clinical experience, for we are still on the threshold of inquiry as far as bacteriological therapeutics is concerned.

Yes, there are undoubtedly cases of pneumonia attending the "grippe" which are frankly fibrinous, pneumococcus pneumonias, so to speak, and which are not directly due to the prevailing epidemic. They pursue their course according to a determined cycle, with well known symptoms, which I need not recall. But there are also pneumonias which are frankly influenzal, which belong essentially to the epidemic genius of the disease; streptococcus pneumonias, if you please, but of a special kind, which we have learned to recognize by clinical experience.

You have seen such patients, presenting all the signs of pulmonary hepatization, with dullness more or less extensive of one of the lungs, with blowing breathing, crepitant râles, augmentation of the thoracic vibrations, bronchophonic resonance of the voice, dyspnœa more or less intense. According to the physical signs, fibrinous pneumonia is inscribed in large letters, and at the same time you will remark the following peculiarities: There are no sputa frankly rusty; the expectoration is represented by a rather scanty, stringy, frothy liquid, or it may be by a liquid resembling a solution of gum arabic, or, now and then, by sputa which are compact, muco-purulent, and absolutely deprived of air. In these cases the bacteriologic examination of the expectoration has revealed to Duponchel a peculiarity which is very important, viz., the absence of the encapsulated diplococci of pneumonia. Nor is this all; your patient may have had a pain in the side, but he has not had the characteristic initial chill, or he has complained of a few slight and repeated chilly sensations like those of the onset of pleurisy, and the affection has advanced sullenly, announced only by a slight pain in the side, a a more or less marked febrile state, and dyspnœa. After eight or ten days, defervescence sets in, but it is incomplete, or its duration ephemeral; soon the fever is rekindled, to be extinguished and then to light up again, while new foci of pneumonia show themselves in divers points of the pulmonary parenchyma. We have, in fact, to deal with a pneumonia of successive invasions, whose

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thermal curve is quite different from that of common pneumonia, and sensibly resembles that of broncho-pneumonia.

You see other pneumonias which march with rapid strides toward gray hepatization, with a sanious and abundant expectoration, and which, veritable galloping pneumonias, run their course in 48 hours, or three days at the most.

There are also cases which you will not fail to meet in times of influenza, which, for want of a better term, I may call forms of *bastard pneumonia*. They present themselves under the guise of pulmonary atelectasis, with subacute and prolonged course, without great elevation of temperature, and for long weeks refractory to all treatment.

You have observed acute and active pulmonary congestions whose intensity is manifested by real attacks of hæmoptysis, which would lead you to fear that a tuberculosis was threatening; yet you cannot find Koch's bacillus in the sputum. Though the temperature may not be very high, it sometimes runs suddenly up to 105° F., as I have noted in two cases which recovered. At other times this pulmonary congestion manifests itself by a diminution and even by a disappearance of the vesicular murmur; the respiration is silent, the sputa resemble a thick, gummy solution, and you have, to confirm your diagnosis of massive congestion of the lungs, only the existence of dullness, augmentation of the thoracic vibrations, and dyspnœa.

On still other occasions both lungs are invaded by abundant fine crepitant râles, breaking on the ear like a pattering rain-shower, and giving you the impression of a mixture of congestion and pulmonary œdema. If you rely on the absence of souffle or blowing breathing, you may lull yourself into a deceptive security, and pronounce a comforting prognosis. But the wave of congestion continually rises, both lungs are invaded from base to apex, the cyanosis already delineates itself on the lips and extremities, which become cold, and the patients are often carried off by an asphyxia, which is almost acute and comes upon the scene unexpectedly.

But this asphyxia of mechanical order is not always produced by the intensity of the congestive movement; it may also be the result of a real massive pneumonia, as it has been called, and as Nonat had so well observed it in the epidemic of 1837, when he described those pseudo-membranous concretions which obliterate almost completely the lumen of the bronchi.

The asphyxia may have still another origin. It is no longer of mechanical order, resulting from the more or less complete obliteration of the respiratory field by those general œdematous congestions, or those fibrinous moulds developed in the bronchi. Your patient has a bronchitis with a limited pulmonary congestion. It is a simple patch of crepitant râles, as large as the hand, with or without blowing breathing; the tongue may remain moist, the temperature a little elevated, and on the strength of these negative data you have not regarded the prognosis as grave. But you already remark a dyspnœa out of all proportion to the feeble intensity of the stethoscopic signs. Soon the respiration becomes more embarrassed, the expectoration is difficult and becomes nil; then the shortness of breath becomes extreme, congestion makes frightful progress, and the asphyxia rapidly carries off your patient, if he does not succumb to a mortal syncope, preceded for several hours by all the symptoms of cardiac collapse. Graves, who had well observed these facts, said with good reason that the patient succumbed to a pulmonary paralysis. These pneumonias or congestions with *broncho-plegic* or *cardio-plegic* form, as I have called them, show you already the profound shock inflicted on the nervous system and on the function of the pneumogastric nerve.

I stop in this enumeration, without speaking of the metapneumonic purulent pleurisies, of the pulmonary gangrenes, of the bronchites with purulent expectoration, and of other forms of pulmonary congestion. I have sufficiently shown you that there is not a influenzal pneumonia, but there are influenzal pneumonias. Clinical medicine has taught us this fact, and bacteriology confirms it. There are congestive pneumonias, inflammatory pneumonias, suppurative pneumonias. There are some that are produced by the pneumococcus, others by the streptococcus, still others by the staphylococcus. Influenza

exalts to the highest point the virulence of all the micro-organisms, and this explains the frequency and the incessant menaces of the secondary infections in this disease. If the fibrinous pneumonias terminate so often by gray hepatization, it is because the microbes of suppuration promptly graft themselves on these pneumonias by the side of the pneumococcus, so that we are warranted in saying that every pneumonia which suppurates does so by secondary infection.

What varieties in these influenzal pneumopathies! And how just is the remark of Potain, that we have got to re-learn the pathology of this dire disease! We have certainly its therapeutics to re-learn.

ACTION OF THE INFLUENZAL POISON.

Influenzal pneumonias, then, exist, and clinical experience proves this; they have their own individuality, their particular behavior, their special stamp. But in the midst of this varied and complex assemblage of neuropathies there is an important fact which has impressed the clinicians of all times and of all countries. I refer to the nervous asthenia, the profound adynamia, the enormous prostration of forces, into which the patients are plunged; and this nervous asthenia precedes and accompanies the principal local manifestation of the influenza; it may even survive it during many weeks or even months.

There is still another phenomenon of influenza epidemics which you have seen, which Graves attributes to a sort of pulmonary paralysis, and which I have referred to the inertia or paralysis of the pneumogastrics. We have all witnessed those overpowering, interminable pulmonary congestions which defy all our efforts; those cases of bronchial paralysis which I have studied under the name of *broncho-plegia*, and which are soon followed by cardio-plegia; which carry off the patient in the midst of the most pronounced asphyxia, or suddenly by an unlooked-for syncope.

The pneumogastrics of certain influenzas, then, seem, as it were, cut. What proves, this is the slowing of the pulse which is observed in certain influenzal pneumonias, and which contrasts so singularly with the elevation of the temperature. One of the historians of the epidemic of 1837 (Landau) remarked that the pulse, ordinarily so large and so full in this disease, is sometimes small and slow. Except in two patients where it rose to 86 pulsations, it did not exceed 72, and generally it varied from 60 to 68.

On the other hand, the arterial tension is diminished, the lessened elasticity and contractility of the vessels no longer sustain the heart, which, deprived at once of its nervous and vascular check (the vagus), falls into exhaustion (cardiac collapsus). Then there supervenes a syndrome, which is important by its prognostic signification; I refer to the fœtal rhythm of the heart sounds, which I have studied under the name of *embryocardia*, and which I regard as the precursor-sign of approaching death.

But the influenzal poison does not paralyze only the pneumogastrics, it does not menace only the contractility of the bronchi and of the heart. It makes its action felt also on the medulla oblongata, and this explains the production of certain hyperthermias which are out of proportion to the slight intensity of the local lesions, the Cheyne-Stokes respiration, the glycosuria, and albuminuria, which are post-influenzal, and which I have often observed.

THERAPEUTIC INDICATIONS.

I have said, and I repeat, that in pneumonia the disease is with the lungs and the danger is with the heart. In influenzal pneumonia the danger is also with the nervous system. It is on these important notions that the therapeutic indications are based.

In every morbid manifestation connected with influenza we do wrong to confine our attention to the diseased organ, and to direct to it all our therapeutic endeavors. We will suppose a simple case of gastric catarrh (*embarras gastrique*). It has lasted for several weeks, resisting all means of treatment. If you see here only a diseased stomach, or disordered intestines in which microbes and toxines multiply, you will be disappointed in your efforts to benefit your patient. Behind this affection, so simple in appearance, there is a damaged condition of the nervous system which influences the entire symptomatology, an asthenia often difficult to over-

come. This is so true that in times of epidemics you will have cases without fever, without any local manifestation, where the entire disease is constituted by this nervous asthenia; we call it the *influenzal state*. When this nervous asthenia occurs without gastric embarrassment, you regard it as the primordial indication to combat the asthenia, and when it occurs with gastric embarrassment superadded, why should not the leading indication be the same?

In influenzal pneumopathies the same fact presents itself. But here the intensity of the inflammatory process is such that it often absorbs all the attention, and the practitioner sees only a diseased organ when the whole organism is damaged. What, then, can we do against the pneumonic process in its formal and cyclical evolution? Nothing, or almost nothing; nor can we be so stupid as to order the popular expectorants—tartar emetic, veratrum, ipecac, kermes—which enfeeble the heart; nor bleeding, which depresses the forces, and should never be practised except under special circumstances (as where there is peripneumonic congestion and mechanical asphyxia); nor blisters, whose principal indication is to be never indicated. Above all things, let us not add what Stahl calls the *malum medicum* to the *malum morbicum*.

But, in the course of a pneumonia or of an intense pulmonary congestion, there is an organ almost compensatory, an organ which is soon to be called upon to contend without cessation against the enormous circulatory embarrassment of the lung; this organ is the heart. It is this organ which we must sustain and fortify early, from the onset of the disease, and without waiting till it, too, is smitten in its function and its contractility. For we must not forget that in influenza patients the heart is more menaced in its nervous influx than in its muscular element.

How many times I have seen the following mistake committed: A more or less extensive pneumonia has set in. The heart, undisturbed the first day or two, precipitates and accentuates its beatings; the systole is vigorous, the pulse full and vibrating, and the medical attendant, relying on these characteristics, thinks that the heart is going to hold out. He does not understand that the heart is beating violently because it has to struggle, because it has a great resistance to overcome, and that it will soon be exhausted and unequal to its task. He does not reflect that this apparent strength of the organ is already an index of weakness and approaching failure. This is what I have observed in a considerable number of cases. After this period of excitation the heart becomes enfeebled, and it is at this moment alone that the physician thinks of giving digitalis, when that drug can no longer do anything for an organ whose contractility is exhausted, and when it can no longer produce diuresis by reason of impermeability of the kidneys supervening at an advanced period of the disease. The digitalis ought, then, to be prescribed at the very beginning of the pneumonia. This is what distinguishes the method of treatment which I advocate from that which has been adopted by all other authorities who prescribe digitalis in pneumonia—Jurgensen, Traube, Hirtz, etc.

In order, then to combat the effects of the pneumonia early, and to prevent them, we must direct our treatment to the heart, and this formula contains the principle of a line of treatment to which I give the name of *compensatory therapeutics*. Let me explain.

You are in presence of a case of grave icterus. The symptoms become more and more serious; the adynamia is profound, the hæmorrhages menacing, the peril imminent, when there ensues a urinary crisis which saves the patient. What does this clinical experience teach us? That it is not upon the liver, *i. e.*, the diseased organ, that we must expend our efforts at treatment in such cases, but upon its compensatory organ, the kidney, whose office it is to eliminate all the toxines which the hepatic cell, profoundly altered, can no longer either destroy or neutralize. For you know that, in order that the functions of the organism may be well performed, it is necessary that the one door shall be shut, and that the other shall always remain wide open. It is necessary that the liver shall be closed during the destruction of the numerous toxines which traverse it, and that the kidney shall remain open for the elimination of the poisons. It is then the kidney toward which you should direct your treatment in diseases of the liver, as it

is the heart in pneumonia. In other words, when an organ is diseased, we must act on the sound and compensatory organs. You execute thus a sort of flank movement, but flank movements sometimes insure the victory.

The indication for digitalis presents itself in almost all the fibrinous pneumonias, not only to combat the febrile element (we do not assume to act directly on the pneumonic process, which is impossible), but to give to the heart a reserve force which it needs in its struggle, and also to ensure in good season by diuresis the depuration of the organism. It is also to ensure this depuration that you should act on the kidney, and on the digestive tube in order to moderate the fermentations of the alimentary canal by intestinal antisepsis.

Lastly, clinical experience teaches us the necessity of sustaining and fortifying the nervous system. The administration of digitalis especially imposes itself in the pneumonias of influenza, where we are sure to have a more or less damaged state of the vagi nerves and bulbar centres, as well as impaired function of the organs whose business it is to protect the organism against the auto-intoxications. It is necessary, then, to prescribe the digitalis from the commencement of the disease, from the first or second day, without delaying to a later period, and for reasons which I have sufficiently set forth.

TREATMENT.

How and under what form will you give the digitalis? I may here state that I have long since renounced both the infusion and maceration. I have for more than four years employed the *crystallized digitalin* of Petit, under the form of solution 1:1000. This preparation is the most easily tolerated by patients, it has an invariable and certain action, and the dosage is easy. I prescribe one dose only a day, of thirty, forty, and even fifty drops of this millesimal solution, which represents in the last-named dose of fifty drops one milligramme ($\frac{1}{60}$ grain) of crystallized digitalin, *i. e.*, about 4 milligrammes of amorphous digitalin.

This dose may seem rather large, yet I have never observed any ill results to follow it, for I have administered it according to certain rules which I have lately set forth before this Society, and because I have always taken care to prescribe in advance of and concurrently with this medicine the exclusive milk diet, which opens the way to the action of the digitalis. We have often heard alleged the accumulative effects of this remedy, its slowness of absorption and elimination; and cardiac medicines have succeeded cardiac medicines without ever the equivalent of this marvelous medicine being found.

It is time to protest against these exaggerated fears, and to affirm that they are largely imaginary. It cannot be too much insisted on that digitalis finds its corrective in the diuresis which attends it, and which thus becomes the safeguard of the organism. It should be prescribed in large doses, because it accumulates and acts slowly.

When you wish to put a patient to sleep, you inject in one dose a quarter of a grain of morphine, and not in four doses. When you wish to act on the febrile state, you prescribe one full dose of fifteen or twenty grains of quinine, and not this quantity in several small doses, to be taken during the day. In the case of quinine, as in the case of digitalis and all medicines whose action is slow, it will not do to divide up the doses; they divide up of themselves in the organism by reason of the slowness of their action and of their elimination. Quite different should be our conduct in the case of medicines whose elimination is rapid, such as the bromides and iodides. It is necessary to divide up the doses in order that the organism may be continuously impressed by the medicine. While on this subject, I may remind you of that epileptic in Ward B, who had been suffering from nocturnal attacks, and who had been taking to no purpose two drachms a day of bromide in two doses of a drachm each, taken during the day, and who was completely delivered of his nocturnal fits by two doses of forty grains each, administered during the evening and at bedtime.

Hence the digitalis ought to be prescribed in one full and massive dose if we would obtain from it rapid and certain effects. My master, Potain, is fond of this way of giving it, and for years I have been, like him, in the

habit of prescribing in cardiac affections this quantity of one milligramme of crystallized digitalin in one dose each day. But this is a maximum dose which I would advise you never to exceed.

The next day, and even the third day after commencing the treatment by 30, 40, or 50 drops of the millesimal solution, I prescribe no other medicine, not even the subcutaneous injections of caffeine, because I always fear to administer a remedy the effects of which may lessen or otherwise modify those of the digitalis. At the same time, if the adynamia is profound, I do not hesitate to practice injections of ether or of camphorated oil. These latter injections are so good in threatened collapse that I must give you the formula which I employ:

℞ Olei oliv. (sterilized), 10 parts.
Camphor, 1 part.
M.

Inject a hypodermatic syringeful of this solution into the arm or hip three or four times a day. These injections are not painful if you inject them *deeply*.

Under the influence of the digitalin the ventricular systole is made with more energy, the pulse becomes stronger, the dyspnœa is diminished, the menaces of œdematous congestion of the lungs vanish, the temperature falls; diuresis is promptly established, and for four or five days it contributes to eliminate all the toxines produced by the infectious disease. Under its influence, still, the arterial tension augments, which is not a matter of indifference in a disease like influenza, characterized, as my researches have shown, by a tendency to hypo-tension of the vessels. And if, in the course of the disease, the indication again presents itself for the administration of digitalis, I do not hesitate to prescribe it again, after seven or eight days, but then in a smaller dose (20 to 30 drops), and do not see in albuminuria an absolute contra-indication to its administration, as has been taught. In certain cases the digitalis lowers considerably the figure of albumin, and in the infectious diseases it provokes by the diuresis the elimination of toxines whose retention in the organism may become a serious cause of auto-intoxication.

With the views actually prevalent we are obliged to make great account of an element of importance in all the infectious maladies. I refer to the hepatic insufficiency, of which I have before spoken. The liver is, in fact, more or less altered. The hepatic cell fulfills but imperfectly its function of arrest and neutralization of poisons, and these penetrate and accumulate in the blood. But the poisoning of the organism may still be prevented by the kidney, which becomes thus an organ compensatory to the liver, being compelled to eliminate a great part of the toxines which the latter organ has not been able to destroy. This it is which explains why during this compensatory period the urine becomes very toxic, and why this hypertoxicity becomes one of the safeguards of the organism. But a moment may come when the hyperactivity of the renal emunctory has its limits as well as its dangers; the incessant passage of these toxic and irritant substances inflames the kidney, and the urine becomes loaded with albumin.

Then it is that insufficiency of the kidney is added to the hepatic insufficiency, and there supervenes an albuminuria of hepatic origin, very different from the albuminuria produced by the glomerulo-nephritis of infectious origin. You see that here the rôle of the practitioner is to promote the urinary depuration by diuretics, and that the indication for digitalis imposes itself anew. This hepatic insufficiency, which plays a great rôle (too often overlooked) in general diseases, should be combated by two lines of treatment—the one, which has for its end to favor the functions of the liver and kidney; the other, whose end is to stop all the sources of systemic poisoning, and especially those of the intestine.

Milk diet fulfills the first indication, for milk is diuretic and diminishes the toxicity of the urine, and it contains sugar capable of transformation into glycogen. It also fulfills the second indication, being poor in salts of potash, which are often toxic to the economy. It is for this reason that it is necessary to suppress from the diet all foods containing much potash, such as meat, and especially broths, and to practice intestinal antisepsis by all the means at our disposal, such as salicylate of bismuth, naphthol, betol, or benzo-napthol. I prefer the last-named medicament in the dose of seven and

a half grains, which may be given in capsules, five or six doses a day; the benzonaphthol is not toxic, is of agreeable taste, and is slightly diuretic.

Intestinal antisepsis ought to be practiced rigorously in all the infectious diseases, and especially in influenza, this disease "which is pestilential *par excellence*," as the old writers used to say. It will not do to neglect buccal antisepsis in the influenzal pneumonias. Bacteriology teaches us that the influenza furnishes a harboring place for a great number of microörganisms; it also teaches us that this disease exalts to the highest degree the virulent properties of the microbes, and that the secondary infections are very frequent. Now we can do little against the primary infection, but we are almost masters of the secondary infections. In an individual affected with simple gastric catarrh you will see develop, after several days, a spreading pneumonia, which you had not foreseen. The pulmonary affection pursues a natural course, when suddenly the symptoms become intensified, the expectoration becomes sanious, abundant, and you note with consternation all the signs of a pneumonia which has arrived at the stage of gray hepatization.

What has taken place in this case? A secondary infection has been added to the primary infection. In this patient, affected with gastric catarrh, the pneumococci normally contained in the buccal cavity have acquired a great virulence, and when the pneumonia is well established, the microbes of suppuration come in to aid in the destructive work. Hence, then, in times of epidemic, in the course of and at the very onset of a influenzal pneumonia, antisepsis of the mouth ought to be practiced several times a day. For all your pneumonic patients, and especially for all your patients affected with the influenza, that disease which weakens so profoundly the vital resistance of the organism to the action of the pathogenic microbes, and which exalts so prodigiously the properties of the latter, prescribe every day antiseptic lavages of the mouth and swabbings of the deep parts with solutions of corrosive sublimate under the form of Van Swieten's solution diluted with water.

I ought to speak of another medicament, quinine, whose employment is often indicated in all the influenzal pneumonias, but to which I do not attribute the preventive influence which some authorities have assigned to it. I am in the habit of prescribing it under the form of the bromhydrate, which contains more of active substance than the sulphate, and which seems to have a specially favorable action on the nervous system —in the dose of fifteen to twenty grains every morning, this quantity being given in three doses with half an hour between them. This treatment I follow up for three or four days only. I have above given the reasons why quinine, like digitalis, should be given in massive doses.

In those desperate cases where injections of camphor, ether, and caffeine have proved insufficient against the adynamic state and the nervous asthenia, I have recourse to sulphate of strychnine, in the dose of $\frac{1}{20}$ to $\frac{1}{30}$ of a grain per day, by mouth or by subcutaneous injection. The following formula is convenient for hypodermatic injections:

℞ Sulphate of strychnia, 1 centigramme.
Distilled water, 10 grammes.

M. Sig. Ten or twelve drops of this solution may be injected under the skin two to four times a day.

Tonics, and especially alcoholic stimulants, are to be prescribed, according to indications. I am partial to the preparations of kola, whose tonic and stimulant qualities I pointed out in 1884. I combine the tincture of kola with an equal quality of tincture of coca, and order a teaspoonful to be given several times a day.

But these are only accessory means, and digitalis, quinine, the injections of camphor, ether, or caffeine, intestinal and buccal antisepsis, ought always to form the basis of treatment of influenzal pneumonia. I hope that I have made it plain to you that from a clinical, as from a therapeutic, point of view he does wrong who sees in the pneumonias of influenza nothing but the diseased lung. I have endeavored also to show you that there does not exist any anti-pneumonic medication, and that we must content ourselves with the treatment which I call *compensatory*, in making use of sound and compensatory organs to act on the diseased organ. I have wished in a word to show you the practical truth of this proposition:

In almost all the pneumonias, and especially in the influenzal pneumonias, the disease is with the lungs and the danger is with the heart; it is also with the nervous system.

In the discussion which followed the reading of this paper, Dr. Bardet affirmed that he was himself an advocate of the treatment of influenzal pneumonia by digitalin, and if the digitalin did not give constant success, it was because the doses prescribed were insufficient. He also insisted on the necessity of practicing rigorously both buccal and intestinal antisepsis. His favorite gargle and mouth wash was a hot saturated solution of boric acid; he also prescribed a dentifrice to be used every day, consisting of five parts of sulphur, three of calcined magnesia, and one of naphthol and of menthol. This should be rubbed well in about the roots of the teeth and over the gums.

Dr. Blondel objected to the use of naphthol in dentifrice preparations, as it renders the teeth friable.

Dr. Pierce Vigier preferred a gargle of sublimate, despite its disagreeable taste, as being the best germicide. Care must be taken not to swallow any of it. For a dentifrice he used a mixture of resorcin, saccharin, carbonate of lime, and boric acid. The peroxide of hydrogen might profitably be employed as a gargle and a mouth-wash.

ACUTE MILIARY TUBERCULOSIS.*

BY I. N. BRAINERD, M. D.

The task that I have set for myself is not to write a systematic treatise upon acute miliary tuberculosis, but to present in as forcible a way as I can some points in the ætiology, pathology, clinical history, and diagnosis of this affection. I have been led to select this subject for a paper because three times in the last year I have been called to see patients, sick with this disease, whose physicians had failed to recognize the ailment.

The first of these three cases was a lady, aged about thirty-five, who had been rapidly failing for about two months. She belonged to the "Christian Science" school of practitioners, and would not have a scientific physician until she could no longer sit up. Getting rapidly worse, I was asked to see her with the attending physician. She was weak, pale, and emaciated. She had a pulse of 110, and a temperature of 102°. Her respirations were only a little accelerated. She had almost no cough, and only a little expectoration. There were some small râles, and there was a little dullness on percussion. The respiration was catchy on each side. She had no appetite. About a year before she had buried her husband, who had died from tubercular phthisis. She herself began to complain and to fall away a little soon after his death, and a suspicion was entertained by her friends that she was developing consumption. I diagnosed acute miliary tuberculosis, and made a prognosis of death within a week. The diagnosis was objected to upon the ground that she did not cough. The prognosis was verified. No microscopical examination of the sputum was made.

The second case was a young lady, aged twenty-one. Her medical adviser had told her that she had the influenza. He made a few visits, assured her that she would be well in a few days, and left the case. A few days later I was called to see her. The respirations were twenty-four per minute, were catchy in both lungs, and were accompanied with large and small moist râles. The percussion note was somewhat dulled over both lungs, especially the lower lobes. She was having free muco-purulent expectoration, with night-sweats, anorexia, and great prostration. I learned that she had been obliged to leave school several times during the preceding year. I diagnosed acute miliary tuberculosis, and advised the mother that she would not long have her daughter with her. Her sputum contained, I subsequently found, swarms of the bacillus tuberculosis. Soon after I began to treat her by the Shurley-Gibbs method, and the bacilli disappeared for a time, subsequently to reappear. Her respirations came down to normal, and her pulse to 90, and remained there until near the time of her death. Having her under my care, I was able to watch the tem-

*Reprinted from the Transactions of the Michigan State Medical Society, 1892.

perature and respiration and pulse curves. I had observations taken every hour with a thermometer. The temperature excursions were very eccentric—sometimes up and sometimes down. The patient died in ten weeks.

The third patient was a man, aged twenty-five. When I saw him he had been sick about eight weeks. He was pale, emaciated, and anxious. He had buried his wife about two years before, her death having been due to consumption. He had become slightly indisposed shortly after her death, but had continued to work until about two months before I saw him, when he suddenly and progressively got worse. He was having profuse night-sweats, and had some cough and expectoration. His appetite had been good, but was failing. His pulse was 106, and his respirations were slightly accelerated. From the history of the case, I learned that his temperature fluctuated much, and this I verified by taking his temperature twice, with an interval of half an hour. The first time it was 99°, and the second time it was 100.5°. It had been as high as 105°, and the pulse as low as 40. The respirations were catchy on both sides, and the percussion note was dulled on the left side. There were no râles. The sputum was swarming with bacilli. I diagnosed acute miliary tuberculosis, and predicted death in a few weeks.

Now, with these cases as a text, supplemented with the authorities, I want to enforce some points in the ætiology, pathology, clinical history, and diagnosis of this disease.

Except in children and young adults, acute miliary tuberculosis is always secondary to tubercular or caseous process elsewhere. It is the termination of the tubercular process which, after having been local, becomes more or less general by an extensive embolic distribution. In each of the three cases cited above there is a more or less distinct history of tubercular phthisis preceding the acute miliary form. In every case we may presume that the patient has been suffering with chronic tuberculosis, or with phthisis, or with pneumonia, or with tubercular joints; when the caseous matter in any of these affections liquefied sufficiently, it was taken into the circulation, plugged many capillaries, and, in the dyscrasic subject, set up a diffuse miliary tuberculosis. The histological and vital conditions of this dyscrasia are, to my mind, a faulty structure of the blood-vessels, the capillaries having too thin, and consequently vulnerable, walls, and a lowered vitality of the leucocytes, so that, when they have escaped from the blood-paths, they easily undergo degeneration. I do not believe that acute consumption is ever caused by the materies morbi produced within the body, and that this material is the purulent detritus resulting from the softening and breaking down of the inflammatory and other hyperplasias which have undergone the caseous degeneration. It seems to make but little difference whether the caseous product was derived from scrofulous glandular hyperplasia, catarrhal pneumonia, inflammation of serous membranes with a cellular exudation, or ordinary cellular inflammation; the only essential prerequisites being that there shall exist a cellular exudation or proliferation, and that these cells shall undergo the caseous degeneration (Lynch).

If it be objected to this theory that not many of those having caseous pus in their tissues develop tuberculosis, the reply is that not many are liable to this disease process. There must first be a dyscrasia of the blood and of the blood-vessels before this disease process will go on.

Many other diseases, as phthisis, chronic tuberculosis, the pneumonias, typhoid and the eruptive fevers, excesses of all kinds, and bad air figure in the ætiology of this disease, by developing that dyscrasia which I have described as a necessary element, and in breaking down any existing caseum. It is also true that these causes render more vulnerable the mucous membranes through which the invasion of the bacilli may take place. But this does not set up acute miliary tuberculosis. This sets up tubercular phthisis, if indeed it sets anything, from which, when caseous matter has resulted, the acute miliary form may be generated.

This disease is most frequent in childhood, but I cannot think that fewness of years is a factor in the causation of this disease. A more probable explanation of its frequent occurrence in the young is that those having

the tubercular diathesis cannot long escape the disease.

Prof. Lynch, of Baltimore, describes the pathology so prettily that I want to quote from him. He says: "The tubercular process consists at first of an undue or excessive emigration of leucocytes through the walls of a capillary which runs through a lymph space, and where, of course, the walls of the vessel are less supported. Those cells whose vitality is lowered by the causes which have preceded and excited the process can neither undergo any process of differentiation nor wander through the lymphatic; they remain in the lymph space, while they crowd, block up, and, finally, occlude the capillary vessel from which they emigrated. * * * As soon as the capillary vessel becomes occluded, further addition to the incipient tubercle from this source ceases; nutrition is now entirely cut off, and the cells, dying, become a foreign substance, and soon undergo the caseous degeneration. By their presence they now excite a quasi-inflammatory process in the endothelia lining the lymph space, and hence we have a secondary addition to the tubercle derived from the proliferating endothelia. Lastly, the inflammatory process extends to the connective tissue around the lymph space, and embryonic cells are added to the mass." These tubercles are always small—too small to be discoverable by any physical sign. They produce but little or no consolidation. There are no cavities, except in those cases that have arisen from tubercular phthisis; and in those cases the cavities belong to the phthisis, and not to the acute miliary tuberculosis.

The clinical history of these cases is pretty well pronounced. The invasion is rapid. If it follow tubercular phthisis, there is a sudden aggravation of all the symptoms, and the sudden death of the patient, as in one of my cases, reported in the Lancet a few years ago. The patient was moving along about as phthisical patients usually do, enjoying at one time some amelioration of symptoms. He then walked out more than usual, and was in a few days taken with an alarming increase of all the symptoms and signs, and died in three weeks.

The temperature is exceedingly eccentric. There is no particular hour when it can be depended upon to be highest. One day it will be highest in the forenoon, on another in the afternoon, and on yet another in the night. It often makes half-a-dozen excursions in a single day. It may fluctuate as much as 3° in one hour. In some of my cases I have had the temperature recorded every hour. When reduced to a chart, its waywardness is shown most graphically. It usually makes a rapid decline with a free perspiration. The night-sweats, too, are always free, and sometimes terrific.

The respirations are usually rapid—often from 30 to 60 per minute. In one of my cases, however, I succeeded in bringing the respirations down to 18 per minute, and in holding them there for a short time. The three cases reported in this paper had unusually slow respiration for this affection. The respirations are not labored, like those in asthma and paretic conditions, nor panting, like those in pneumonia, but more like the rapid breathing of infancy. The respiration-pulse ratio is not greatly changed.

Cough is slight or moderate, and need be no worse than it is in typhoid fever. The expectoration is usually small, and it may be entirely wanting. Now you see how trifling was the objection raised by the attending physician in Case 1 above, viz., that the patient did not cough. We can only believe, when we see such errors in a medical man, that he is neglecting his studies and that he is a poor learner from experience. These men apprehend only the grosser lesions of consumption, and think that a consumptive must present evidences of pulmonary consolidation and of cavities, and that they must have loud râles, cavernous breathing, pectoriloquy, persistent cough, and profuse expectoration, whereas there may be none of these signs. If I succeed in this paper in enforcing only this one thought, I shall have rendered some material aid, I believe, to the cause of medical education. Except in those cases following tubercular phthisis, there will be but little expectoration, and that little will be for the most part thin and viscid mucus, whipped into foam by the efforts to clear the tubes.

The pulse is rapid, and of good volume, force, and tension at first. Later the volume, force, and tension all fail until the pulse

is rapid, small, feeble, and soft. The pulse does not fluctuate like the temperature, neither is there much likeness between the temperature and pulse curves. The tubercles form in successive crops, and hence all the symptoms come in waves. The clinician must not be deceived by any temporary improvement that the patient may show.

Now it does not seem to me that the diagnosis ought to be so very difficult. Given a case, recently ill with pneumonia, or typhoid or other fever, or suffering from tubercular phthisis, or from scrofulous glands, or from pent-up pus in a deep abscess, having a rapid pulse, eccentric temperature ranging from 100° to 105°, a slight cough with but little expectoration, and no râles or other physical signs such as dullness on percussion, tubular respiration, bronchophony, etc., with profuse night-sweats and rapid emaciation, great prostration, and anorexia, you may with great probability of correctness make a diagnosis of acute miliary tuberculosis. Let it not be forgotten that, except in children, acute miliary tuberculosis is always secondary to some other disease. And let it not be forgotten that that other disease is most frequently a tubercular or a scrofulous disease. And remember that, if succeeding tubercular phthisis, the physical signs of that malady will be concomitant with the symptoms of this. Add to this list of diagnostic points the discovery of the tubercle bacillus, and you may be sure of your diagnosis. The bacilli, however, belong to the previously existing disease, and prove the existence of a state favorable to the development of acute miliary tuberculosis. The bacilli are no essential part of the disease.

Alma, Mich.

CLINICAL LECTURES.

BY R. G. CURTIN, M.D.

Treatment of Pleurisy and Empyema.—Success in the treatment of pleurisy will largely depend upon its early recognition. After having satisfied yourself that you have a serous-pleural effusion, the next question is: How shall you get rid of it? If the effusion is allowed to remain, it may change to pus, giving you a much more formidable disease with which to cope. You have then an empyema, or a large abscess in the pleural cavity, which depresses the lung, produces constitutional disturbance and disease of other organs, and may lead to a fatal result.

In the early stage of pleurisy we have the constitutional symptoms, caused by active inflammation, which usually subside after a few days. For the fever we give a simple febrifuge and an opiate, or some other quiescent to relieve the pain and cough, assisted, perhaps, by the application of a counter-irritant, with the object of relieving the congestion and associated pain. When the effusion takes place, we should carefully watch the upper limit of the fluid, before we take active measures to hasten absorption. The constitutional disturbance usually subsides about the time the effusion takes place. The most rapid means of getting rid of this effusion, aside from aspiration, is by means of a large blister, applied over the base of the chest. The blister should be large—from four to six inches square—and before applying it you should be sure that the secretion in the pleural cavity has ceased to ascend or increase, for if you do not so assure yourself you may have a sudden increase in the effusion after the application of the blister. The serum which comes out as a result of the blister is not from the pleural cavity, as is generally supposed, but from the blood vessels under the skin. The effusion usually begins to subside as the blister commences to dry up, and the greatest results are usually noticed at the time of the final healing of the blister. One blister may be sufficient; more may be necessary before the effusion entirely disappears. Sometimes, in the later stages, we may assist absorption by painting the chest, front, and back, on the side affected, with tincture of iodine twice a day, if the patient can bear it.

How can we assist absorption by internal remedies? Iodide of potassium is the most efficacious internal remedy. It has often a wonderful effect upon the fluid within the chest. There are two remedies which have been used from time immemorial for the purpose of aiding in absorbing the fluid. I refer to pulverized squills and digitalis, which are supposed to operate by their diuretic action. You may ask: Why do I not recommend aspiration? In some cases, where all the

ordinary remedies fail, it may be necessary, but such cases are extremely rare, and I prefer to use all the simpler remedies first; besides, it is not altogether safe, for after aspiration I have seen a pleural effusion changed into an empyema. This condition of affairs may exist without aspiration, but with it it is more likely to occur. I have seen an empyema as early as eight days after the first evidences of effusion. It would be impossible for medical treatment to arrest such a rapidly changing fluid as this.

At the Medical Congress, held this week at Washington, Dr. Richardson, of Boston, read a very instructive paper upon the surgical treatment of empyema. He had performed many operations, and concluded that the best treatment of empyema was either by making a free incision between the ribs, or by denuding the rib of its periosteum and taking out a piece of the rib, thus leaving an opening through which free drainage is secured, and also room to use aseptic and antiseptic solutions as desired.

To return to the subject of simple pleurisy. What treatment shall be pursued after the serous effusion has been absorbed? The lung is bound down so that it cannot fully expand, and the patient is troubled with pain and shortness of breath. In some cases the simple protection of the chest walls by means of additional covering is all that is required to stop the pain. Sometimes iodine applied to the chest is sufficient. After the effusion is absorbed there is always some change in the shape of the chest. This is due to the fact that the lung on the affected side is unable to expand fully, owing to the adhesions formed on its pleural surface. In addition to this the healthy lung becomes unduly expanded, which occasions a slight increase in the size of the chest on that side. In brief, we have one side of the chest increased in size and the other decreased, a condition of affairs which continues throughout the life of the individual. This can be demonstrated by taking two lead strips, bending them accurately to the sides of the chest, placing them on a piece of paper, and with a pencil tracing the outline. This outline, which is the shape of the chest, will be found to be larger on the side opposite the seat of the pleural effusion. The compression of the lung, by adhesions after the absorption of an effusion, sometimes gives rise to shortness of breath after exercise or excitement. Sometimes there is associated with this oppressed breathing a short, dry cough. These conditions may call for treatment that will expand the lung. One of the most effective and simple ways of doing this is by horseback riding on a rough trotter. The way in which this acts in expanding the lung is that the rapid descent of the diaphragm causes a sudden increase in the capacity of the chest, which causes the air-vesicles to expand quickly, and, as a consequence, the adhesions stretch, by reason of which the capacity of the lung is increased and the symptoms heretofore mentioned are relieved. Another way in which the lung may be expanded is by residence at a high altitude. The rarefaction of the air causes deeper inspirations to aërate the blood; this occasions an expansion of the vesicles, and so increases the capacity of the lung. The two methods just described may be combined.

Another way to expand the lung after a pleural effusion is to fill the lungs with air and go through a variety of active gymnastic exercises. Vocal gymnastics and massage can both be used with advantage in these cases.

CARCINOMA OF STOMACH.—This patient is 58 years old, a widow, who has followed the occupation of a domestic for some time. After carefully examining her family history, we find that there is no evidence of cancer or any other hereditary disease. She has had nine children, and has always worked hard. She had an attack of marked jaundice four years ago, and three years ago an attack of rheumatism. Her present trouble began one year ago. She first noticed an inability to swallow solid food and a gradual failing of strength. She had vomiting and a pain in the epigastrium. She has emaciated greatly in the last three months.

Two things are to be observed in the history of this case: First, her age, and, secondly, the fact that she has rapidly emaciated during the last three months. She came into the hospital suffering with pains in the shoulders and elbows. Her arms were helpless.

At that time she could eat semi-solids; but now even small quantities of milk are vomited. She vomits large quantities of mucus, and before the stomach is evacuated of this mucus there is pain in the umbilical and epigastric regions. Her bowels are constipated, and large doses of laxatives are necessary to overcome this. She is very anæmic. The resident physician has examined her blood, and found that there are a little over three million red corpuscles to the cubic millimeter, and the hæmoglobin is only 65 per cent. of normal. A glance at her temperature sheet shows that when she was admitted her temperature was 104°. In 3½ days it was down to 97°, afterwards becoming normal. About a week later it started up again, and continued elevated for several days. It is now sub-normal. No evidence of inflammation exists anywhere.

We will now examine her abdomen, to see if we can find a cause for the stomachic conditions that exist. Vomiting, with loss of flesh and anæmia, may be caused by a number of diseases. Her age is 58, and the disease seems to be growing progressively worse. Upon palpating the lower part of her abdomen, I find some hardening. It feels like scybala, and from the fact that her bowels have been obstinately constipated, I am satisfied that such is the case. A little to the left of the median line, just above the umbilicus, I find a tumefaction about the size of a small egg, which pulsates under my finger. It seems to be alongside of the abdominal aorta, and I can feel a sulcus, but they seem to be joined together and firmly fixed.

When I put my finger on the outside of the tumor, there is some little pulsation, the finger moving away from the aorta. I now apply my fingers above and below the little tumor, and I find that my fingers are only raised anteriorly, there being no lateral pulsation. I now place my finger behind the tumor, and no pulsation is felt in that locality such as we would naturally expect to find in an active aneurysm. I now place my stethescope over the tumor, and no sound like a bruit is heard. In this connection I would caution you, when examining an abdominal aorta, not to press too hard. If you should, you would be liable to compress the aorta and produce a false bruit. Many mistakes are made in this way. There is a little soreness complained of by the patient when I press upon the nodule under examination. I again apply my hand over the tumor, and ask the patient to take a long breath. It does not move up and down with the diaphragm as it would if it were attached to any of the organs immediately connected with the diaphragm.

What is this small tumor? This is the next question for us to consider. It is one of two things—either a gland or nodule of cancerous material, alongside of and joined to the aorta, or else a cured aneurysm, that is, an aneurysm which is filled up with clots, so that there is simply a channel the size of the aorta. Hence the absence of a well-defined pulsation, bruit, and thrill.

No other evidence of unnatural induration is found in any portion of the abdominal cavity, except as before stated. I ask her if she ever vomited blood. She answers that she has not. I ask her if she has ever vomited anything like coffee grounds. She again answers in the negative. I ask this second question because blood which has been acted upon by the gastric juice becomes dark and grumous, resembling coffee grounds, and when this substance is present, it is as much an indication of a hæmorrhage as if it were pure red blood.

Could we have carcinoma, or ulceration of the stomach, without hæmorrhage from the stomach? There are cases of acute and chronic carcinoma of the stomach, as well as ulcer of the same organ, which begin and end without any tendency to hæmorrhage. It all depends upon the erosion of blood vessels. If this does not take place, hæmorrhage is absent. In ulcer of the stomach we are more liable to have hæmorrhage than in carcinoma. Now, the question for us to decide is whether this woman has carcinoma or ulcer. The symptoms are largely in favor of carcinoma. The progressive course of the disease, the extreme emaciation, and these associated with a small tumor below the epigastrium, all point in that direction. How shall we treat a case like this? The most important indication is to arrest the starvation process going on with steady march. How shall we give her nourishment

while the stomach fails to absorb the food introduced into it? This can be done by nutritive injections into the bowel. We can in this way use milk, liquid peptonoids, beef essence, or defibrinated blood.

Dr. A. H. Smith, of New York City, has experimented extensively with the last named article, and considers it the best of all such nutritive substances. It is more readily absorbed, and requires less change before assimilation. You must be careful not to give too much food by the rectum. Three ounces is the limit in the case of most persons, and six times a day, or every four hours, is as often as the bowel will admit of, irritability even following its use when given only twice a day, and some bowels are much more sensitive than others. This should govern you in the number of injections given, for if you should produce an irritability that would render the bowel unable to retain injections, this avenue for alimentation would be lost. The great loss of flesh in this case is due largely to the fact that fats are rejected by the stomach before they are absorbed by the intestine. There is another avenue by which we can introduce fats, and thus supply to some extent this deficiency. We will have the chest and abdomen of this patient rubbed with olive oil. It should be rubbed daily, at least 10 minutes, a few drops being put on the skin and friction used until it is absorbed. This process should be repeated several times. In this way fat can be introduced into the system, without disturbing the stomach. If this were gastric ulcer, the patient's condition might be benefited by this treatment until the ulcer should be healed. In this case it is given simply to prolong life, and make the patient more comfortable. I will order for the stomach peptonized, skimmed milk and beef essence, in very small quantities. These substances contain very little that is not absorbed by the stomach, consequently very little is left to disturb that organ and cause pain. Compound rhubarb pill is a very good laxative for the bowels in these cases.

[Two weeks later a distinct tumor in the epigastrium was found, evidently connected with the stomach, and the small tumefaction had markedly increased in size.]

Philadelphia Hospital.

DOSAGE.

BY DR. L. A. MERRIAM.

The Century Dictionary thus defines dosage: "The act or practice of administering medicines in doses," and "A dose is the quantity of medicine given, or prescribed to be taken, at one time, or within a specified time." If I prescribe a mixture to be taken, a teaspoonful at each time, the commonly understood meaning is that the teaspoonful of this mixture or solution is the dose of medicine. This popular idea is, however, erroneous. The scientific, professional, and correct idea is that the quantity of the mixture or solution prescribed or given contains the dose. The excipient or the menstruum is not the medicine, but the vehicle that contains the medicine. When you give a tincture, a syrup, or a fluid extract, the alcohol or syrup is not the medicine, but the medium used to preserve and hold the medicine or render it palatable. When you give a grain of powdered opium, you never know how much of that grain has the power of action upon the living tissues of the body. And so it is with many other agents used as medicine. The reason for this is that the substance used has in its composition much inert matter incapable of exerting any therapeutic action. With several agents used, also, there is such a varying quantity of the active principles that one is never certain of the dose given.

A medicine is the agent that has the power of acting when used under proper conditions, and the dose is the quantity that acts. Dunglison says: "A dose is the quantity of any substance which ought to form part of a compound medicine, or ought to be exhibited singly to produce a desired effect." Yet this definition is not absolutely correct, as we shall see later. If there is any part of our professional field that needs cultivation, weeding, and developing, it is that of therapeutics, and I often wonder that so many of our excellent teachers in this field should still be satisfied with the crude ideas of former days. Therapeutics should be more scientific, more accurate, more positive, and should aim with mathematical precision to obtain definite and exact results. The quantity of a medicine acting upon the vitality of one or

more nerve cells is not always the amount given for that purpose, for some medicines are not retained, but soon rejected by vomiting; some mix with the contents of the stomach, and hence are very slow in being absorbed. Others, though soluble, fail to be absorbed, because absorption is a varying condition. It varies with the condition of the absorbing surfaces, with the density of the menstruum, with the relative fullness or emptiness of the vessels, and with the degree of saturation of the secretions. Remember that absorption and osmosis, though similar, are not identical, for absorption is dependent upon life, or the amount of vitality, while osmosis may exist without either. Nor must it be forgotten that some medicines undergo changes during the time they are *en route*, or from the moment they enter the body until they reach a point where they can manifest their action upon the nervous system. Then, again, some remedies are eliminated very rapidly, and others very slowly, with a supposed cumulative action. Or it may be that the medicine may in time be tolerated in increasing quantities, and I think we have evidence of a condition which may be called saturation, where the medicine given beyond a certain amount is eliminated without having an increased therapeutic action. These are all conditions which may modify the action of a medicament. There is one more that needs some explanation, if possible, and that is impressionability.

Holding firmly to the modern scientific teaching that all the so-called forces of this vast universe, including vital force and even life itself, are not only correlative, or reciprocally related, but also convertible, in accordance with the laws of nature, I affirm that the motions which constitute our physical bodies are susceptible of modification, of being augmented, diminished, transmitted, transformed, and decomposed by the action of medicinal agents and the influence of environing conditions. Life is only an atomic vibration of matter giving rise to particular forms and manifesting itself by functions which are only the phenomenal expression of this vibration, transformed into chemical, mechanical, or physical motions. Disease is a degeneration or reversion of structure to simpler forms, a conversion of complex motions into motions of a lower and more stable order, consequently a loss or diminution of higher and complex motions by transformation into simpler motions. To prevent this reversion or transformation of less organized complex motions into more organized simpler motions and to assist in restoring and inciting the normal functions is the end to be gained by a favorable environment and the judicious use of medicinal agents. To accomplish this in a scientific manner we should know two things, viz., the patient to be influenced and the proper medicinal agent to be given to accomplish the end desired. The medicinal agent used should be a tangible substance of standard strength and purity, whose action upon the organism is clear, definite, and reliable. To know the patient is more difficult, for the complex motions which constitute the forces of the body are in no two persons identical, though they are similar. Could we know with mathematical exactness the impressionability of each tissue, then we might sum up the entire impressionability of the patient. We may know the kind of action a medicament may have, but not be able to tell the degree or extent of action of the agent, for no patient is absolutely the same in successive moments, and a prescribed amount, that is tolerated to-day, may be rejected or do material harm a few days later. The different stages of life, the temperament, the degree of health, manner of living, customary food, habits, and numerous other things may materially modify the impressionability of the patient, and force us to the logical conclusion that the degree of impressionability of a patient cannot be determined *à priori*.

This being the true status of the question, we now return to the more practical consideration of the question of dose. I think there will be no objection when I say that the therapeutic dose is that portion of a medicament introduced into the body which produces a determined action, and from foregoing statements relative to absorption, elimination, impressionability, etc., the proposition is justifiable that it is impossible to calculate the active portion of any quantity of a medicament whatsoever.

In the treatment of diseases in a rational

manner by the use of therapeutic agents, how can we obtain certain desired results and at the same time be sure we are doing no harm to the vitality of the patient, when we are unable to determine just how much of a given agent will exert its action? Burggraeve, of Ghent, has given us a law that applies to nearly all such cases. It having been determined by the only method possible, viz., experience, what action a medicament possesses and what symptoms it exhibits or produces, the initial quantity given should never be capable of producing any toxic effect. Hence the wisdom of using medicines that have a definite chemical constitution free from any extraneous matter. These pure and active principles of definite standard strength should be prepared in the laboratory, rather than compel the stomach and absorbents to pick out the active principles from a mass of crude, imperfect, and poorly prepared compounds. I know the profession are said to be very conservative and to cling tenaciously to old and establish ideas. There are too many in our ranks that fear the developments of modern scientific methods, but I believe that time is not far distant when our leading physicians will appreciate the fact that therapeutics, as usually taught and practiced, is far behind what it should be, and a united effort will be made to place this branch of our art on equal footing with the art of surgery.

Burggraeve, of Ghent, has said some good things and has done much for twenty-five years to place therapeutics on a logical and scientific basis, and his bases are only recently beginning to be appreciated. As an illustration, take his idea that medicines should be pure and accurately divided as to quantity, easily soluble, that they may be readily absorbed, and given in small and frequently repeated doses until the desired effect is obtained. The quantity administered at each set time may need to be increased or diminished or given more or less frequently as the case demands, but the principal or dominant medicament should be continued uninterruptedly until the purpose for which it was given has been accomplished. As an instance of this method, we note the sulphide of calcium and peroxide of hydrogen in diphtheria and the exanthematous diseases, and aconite and strychnia in all fevers and inflammations.

It is said that Herbert Spencer's Psychology could not be understood when first published in 1855, and it was thirty years afterwards when it first became a text book in a college or university. So it seems to be with the therapeutic method of Burggraeve, of Ghent. Frowned upon now by the ablest physicians, misunderstood and unappreciated, Prof. Ad. Burggraeve stands to-day without a peer in his therapeutic methods. Though he has been a teacher of medicine and a voluminous writer of ability for more than twenty-five years, yet I have no doubt there are many who know nothing of his arms of precision, his pure medicines, or his measured doses.

It should be remembered that this is not a new pathy or system, but is a twenty-five-year-old method, not to be used exclusively, but only as a step of progress out of the old paths of polypharmacy, and into the clearer sunlight of scientific and rational therapeutics.

Omaha, Neb.

ARISTOL IN CARCINOMATA OF THE CERVIX UTERI.

Dr. Eugenio Areoles (Riforma Medica, No. 231) recommends the use of aristol in carcinomata of the uterus. Although this remedy is incapable of curing the cancer, it may exert a very valuable symptomatic effect, as is shown by the cases reported. One case—a woman with carcinoma of the cervix, who had been under observation for a number of years—had been treated by a number of physicians with various measures, but without success. The author tried insufflations of aristol upon the growth, under guidance of a speculum. From the first day of treatment the patient experienced relief, and for the first time she was again able to sleep through the night. After a few days the hæmorrhage ceased completely, the ichorous discharge subsided, and the digestive disturbances disappeared. Aristol acts as a protective covering for the ulceration and stimulates cicatrization, and, owing to the fact that it is not absorbed, all danger of poisoning is excluded.

The Medical Age.

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B. W. PALMER, A. M., M. D., Editor.

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Editorial.

THE FORTY-THIRD ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

Look up and not down;
Look forward and not back;
Look out and not in;—
Lend a hand!

—Edward C. Hale.

The 1892 meeting is now history. It is a pleasure to record that on the whole the meeting has been a grand success. The extent and character of the attendance, the social and scientific features, and the prospect indicated of more perfect organization and management indicate that it is growing vigorously.

What is wanted is a better recognition of its advantages. Its members, North, East, South, and West, should "lend a hand" and work in union for its advancement. Let no sectional issues or petty differences interfere with the exercise of its united power and influence for the good of the profession.

The officers elected for the ensuing year were:

President, Dr. Hunter McGuire, of Richmond, Va.; First Vice-President, Dr. H. O. Walker, of Detroit; Second Vice-President, Dr. H. Brown, of Kentucky; Third Vice-President, Dr. H. Janes, of Vermont; Fourth Vice-President, Dr. Jesse Hawes, of Greeley, Col.; Treasurer, Dr. R. J. Dunglison, of Philadelphia; Secretary, Dr. W. B. Atkinson, of Philadelphia; Assistant Secretary, Dr. Montgomery; Librarian, Dr. George W. Webster, of Chicago.

Milwaukee, Indianapolis, Chicago, and one or two other cities contended for the next place of the meeting of the Association. The Committee finally decided to recommend Milwaukee.

The following were elected to fill vacancies on the Board of Trustees of the Association: Dr. Alonzo Garcelon, of Lewiston, Me.; Dr. Leartus Connor, of Detroit; Dr. Perry H. Millard, of Minnesota, and Dr. Patterson, of Washington.

Members of the Judicial Council were selected as follows: Dr. N. S. Davis, of Chicago; Dr. John Morris, of Baltimore; Dr. H. D. Didima, of New York; Dr. John B. Roberts, of Philadelphia; Dr. A. M. Emmert, of Iowa; Dr. W. T. Briggs, of Nashville, Tenn.; Dr. C. W. Vorhes, of Coldwater, Mich.; Dr. W. E. B. Davis, of Rome, Ga.; Dr. A. Morgan Cartledge, of Louisville.

The social features of the meeting, if we may quote the opinions of many visitors, excelled in variety and interest those of any previous meeting.

The receptions and entertainments were: A dinner to medical editors at the Detroit Club; a reception to the members of the American Medical Association and their ladies at the Light Infantry Armory by the Medical Profession of Detroit; receptions to the members at the residences of Hon. H. S. Pingree, Gen. R. A. Alger, Mr. George S. Davis, Mr. Frederick K. Stearns; an excursion on the Detroit River and Lake St. Clair, with luncheon.

In addition to these, some of the Sections arranged for dinners, and there was profuse private entertaining of the guests.

Many of the physicians and their families took the opportunity of seeing how medicines are manufactured in Detroit, and, being equipped with yachts and carriages, visited Parke, Davis & Co.'s laboratory, where they were refreshed by luncheon and music.

Of the papers there were many notable ones presented, some before the meeting at large and others before the various sections.

Among the important business transacted was the appointment of a committee to consider the code of ethics and report at the next meeting. A most exciting discussion arose over the eligibility for membership

in the American Medical Association of those who were members of State Medical Societies which do not conform to the regular code of ethics of the National Association. If such members were not eligible, a large number of old members would be disqualified. The question was finally amicably adjusted by the appointment of a Committee on Conference, to be composed of five members each of the National Association, the New York State Medical Society, and the New York Medical Association, the committee to report in one year, and in the meantime all New York men will be considered full members of the National Association and entitled to all of its privileges.

The weather was for the most of the time delightful, and if the visitors do not carry away with them pleasant impressions of Detroit, it will not be for any lack of effort or hospitality on the part of their hosts.

THE PAN-AMERICAN MEDICAL CONGRESS.

The Congress of the greatest importance, not only to the medical profession, but to all the professional and commercial interests of America, should receive the ardent support of every intelligent, thoughtful, and progressive physician.

Its advantages are manifold, and have been before presented in the AGE. Its great purposes have enthused many of the profession to undertake the necessary work to make it a success.

The officers and committeemen of the Pan-American Medical Congress held a conference at Detroit during the meeting of the American Medical Association.

Dr. William Pepper, of Philadelphia, President of the Congress, made a brilliant speech, in which he outlined the plans for the great gathering and called attention to the fact that it was necessary to push matters rapidly, as the Congress is to be held in September, 1893, and a great deal of work will have to be done in preparation.

Dr. Charles A. L. Reed, Cincinnati, Secretary-general of the Congress, spoke eloquently and practically on what work had been done and what remained to be done. He said that pamphlets concerning the event would have to be published in English, Spanish, and Portuguese, and this would involve heavy expense. Items for other printing, clerical work, correspondence, etc., necessitate a good fund in advance. Dr. Reed said that he hoped members of the profession would come forward by the hundred and register for the Congress at $10 per head.

It was suggested that all those present should consider themselves as financial committeemen. Everyone promised to his best to secure names, some assuring Dr. Reed of at least thirty from their States.

DR. CHARLES J. LUNDY.

The sudden death of Dr. Charles J. Lundy, one of Detroit's most prominent and esteemed physicians, has greatly shocked his family and large circle of friends. Dr. Lundy graduated from the medical department at Ann Arbor in 1872 and began practicing at Bellevue Hospital, New York, studying especially ophthalmology and diseases of the ear and throat. He received a degree at Bellevue in 1875 and returned to Detroit in 1878, where he soon built up a large practice, being highly regarded for his proficiency both by the public and the members of his own profession. He was one of the founders of the Michigan College of Medicine and was professor of diseases of the eye, ear, and throat at the Detroit College of Medicine. He was also one of the promoters of the Detroit School for Nurses and the Michigan Free Eye and Ear Infirmary, and, in fact, has always been active in the promotion of legitimate medical enterprises. He was a member of the American Medical and Ophthalmological Societies at the time of his death, while various articles which he wrote in his own special line attracted a good deal of attention. The esteem in which he was held by those who were aware of his general proficiency was evinced in the recent action of the State Medical Association, which chose him President.

MEDICAL EDITORS BANQUETED.

O hour of all hours most bless'd upon earth,
Blessed hour of our dinners!

—Owen Meredith.

The visit of so many eminent medical editors to Detroit to attend the meeting of the American Medical Association afforded a rare opportunity of entertaining them, which Mr. Geo. S. Davis hospitably availed himself of in gathering them around the same mahogany at the Detroit Club.

On the evening of June 6th, forty of these good knights of the pen sat down to a tasteful and inviting menu, at a table daintily adorned with smilax, roses, and rare china, chastely lighted by candles. Under the entrancing harmonies of the Mendelssohn Quartette and Schremser's orchestra, the editors unbent their editorial brows and participated in a feast of reason and flow of soul which will long remain a delightful memory. They were fortified for the mental feast by the following prescription:

℞

Cocktails. Olives Farçis. Caviar.
Petits Bouchés Capucin.

Amontillado. Little Neck Clams.

Printannière à la Royale.

Haut Sauterne. Filets de Sole à la Normandie.
Pommes Parisiennes.

Château Haut Bailley. Quennelles de Volaille
à la Richelieu.

Soft Shell Crabs à la Newburg.

Chambertin. Petits Patées Riz de Veau.
Petits Pois Nouvelles.

Cigarettes. Punch de Maraschino.

Moët et Chandon. Becassines Rotis au Cresson.
Pommery sec. Champignons Frais Grillés.
Pommes Duchesses.

Asperges en Salad.

Fraises Glacés.

Fromages.

Café.

Liqueurs. Cigars.

After the prescription came the toasts. Dr. F. W. Mann, of Detroit, officiated cleverly as toastmaster, and gracefully introduced the gentlemen who eloquently and wittily responded.

The toasts and responders were: "The Editorial Profession—Our Noble Selves," by Dr. J. C. Culbertson; "The Editorial Article," by Dr. H. A. Hare; "The Waste Paper Basket," by Dr. Bayard Holmes; "The Book Review," by Dr. Charles McIntyre; "The Proof Sheet," by Dr. W. Porter; "The Scissors," by Dr. I. N. Love. These gentlemen were followed by an imperative call for the host, Mr. Geo. S. Davis, in response to which Mr. William E. Quinby made a characteristically happy speech, and was followed by Dr. A. L. Gihon, Professor J. P. Remington, Dr. Henry O. Marcy, Dr. Frank Woodbury, Dr. G. E. De Schweinitz, Dr. Edward Martin, Dr. Leartus Connor, Dr. Dudley S. Reynolds, and Dr. John B. Hamilton.

We believe the sentiments of those present may be voiced by the words of the late Lord Lytton when he wrote:

The land of his birth;
The face of his first love; the bills that he owes;
The twaddle of friends and the venom of foes;
The sermon he heard when to church he last went;
The money he borrow'd, the money he spent—
All of these things a man, I believe, may forget,
And not be the worse of forgetting; but yet
Never, never, oh never! earth's luckiest sinner
Hath unpunish'd forgotten the hour of his dinner!
Indigestion, that conscience of every bad stomach,
Shall relentlessly gnaw and pursue him with some ache
Or some pain, and trouble, remorseless, his best ease,
As the Furies once troubled the sleep of Orestes.

We may live without poetry, music, and art;
We may live without conscience, and live without heart;
We may live without friends; we may live without books;
But civilized man cannot live without cooks.
He may live without books—what is knowledge but grieving?
He may live without hope—what is hope but deceiving?
He may live without love—what is passion but pining?
But where is the man that can live without dining?

THE AMERICAN ACADEMY OF MEDICINE.

This Association held its seventeenth annual meeting at Detroit June 4th and 6th. The officers elected for the ensuing year

were: President, Justin E. Emerson, M.D., of Detroit; Vice-Presidents: Thomas F. Moses, of Urbana, Ill.; Charles Dennison, of Denver, Col.; Silas D. Presbry, of Taunton, Mass.; H. B. Allyn, of Taunton, Mass.; Treasurer, J. Chester Morris, of Philadelphia; Secretary, Charles McIntire, of Easton, Pa.; Assistant Secretary, Edgar M. Green, of Philadelphia, Pa.

Sixty-six new Fellows were elected to the Academy, and this number, added to 543 active and nineteen honorary members, gives the Academy a total membership of 618.

The President, Dr. P. S. Conner, of Cincinnati, chose for his annual address "The Essentials and Non-Essentials in Medical Education." Among other papers read were the following: "Eligible Fellows," by Dr. Justin E. Emerson; "On the Value of Academical Training Preparatory to the Study of Medicine," by Drs. E. Wing, Walter D. Bidwell, Herman B. Allyn; "The Value of a Collegiate Degree as an Evidence of Fitness for the Study of Medicine," by Dr. L. Harrison Mettler; "The Value of the General Preparatory Training Afforded by the College as Compared with the Special Preparatory Work Suggested by the Medical School in the Preliminary Education of the Physician," by Dr. Thomas F. Moses; "The Newer Medical Education in the United States—Does a Classical Course Enable the Student to Shorten the Period of Professional Study?" by Dr. Victor C. Vaughan; "The Necessity for, and Best Methods of, Regulating the Practice of Medicine," by Dr. Perry H. Millard.

One of the most enjoyable features of the meeting was a reunion of the members at a banquet at the Cadillac on the evening of June 4th. The responses made to the toasts were witty and entertaining.

The large addition of new members should encourage the Society to actively continue their work in behalf of elevating the standard of character of the Doctor of the future. It is not a theory, it is a condition that confronts us." The objects of the Academy can only be achieved by earnest work in restricting the matriculants at medical colleges to those fitted to undertake the pursuit of so exacting a profession.

THE TREATMENT OF PNEUMONIA BY DIGITALIS.

There is anything but agreement among practitioners as to the utility of digitalis in the early stages of acute fibrinous pneumonia. Some, as Petresco of Bucharest, regard digitalis as almost a specific in this disease. The leading indication, they say, is to fortify the heart, and there is nothing which so meets this indication as digitalis. Petresco, who has advocated the digitalis treatment more strongly than any other living writer, and whose writings on this subject would make quite a volume, thinks that it is principally by a stimulating action on the pneumogastric that digitalis does good in pneumonia.

Now, pneumonia is defined by him (conjointly with Fernet) as a *paretic neurosis of the pneumogastric*. Digitalis, by exciting the energy of the pneumogastric, augments the contractile power of the heart, improves the general circulation, and consequently prevents the stagnation of blood and the morbid localization before it is produced, or combats the latter after it is produced.

There is much more of this kind of reasoning in Petresco's recent article in the Bulletin général de Thérapeutique,* all of which may be summed up in these words: Digitalis fortifies the heart, contracts the arterioles, and keeps the capillaries cleared. This action is especially marked and salutary where there is an inflamed area, and even an exudation. Petresco refers to statistics of his own which show very gratifying results, the mortality, since he has relied on digitalis, having fallen from 7.15 and even 30 per cent. to 1.22 per cent. Since 1883 he has had to treat 755 well-marked cases, with this surprisingly small percentage of deaths, the attack usually aborting by the second or third day, and the physical signs disappearing altogether generally at the end of the third. His method is to give from one drachm to two drachms of the powdered leaves in infusion to adults *per diem;* "to take every half hour a tablespoonful of the infusion" is his direction.

Practitioners in this country regard with wonderment and incredulity such treatment

* Bulletin gênêral de Thérapeutique, February 15th, 1892, p. 120.

and the results claimed for it; they would consider such doses as paralyzers of the heart, and would expect death from them in every instance. It would seem that the digitalis used by Petresco must have been of poor quality, for it cannot be too much borne in mind that small doses are a cardiac stimulant, while large doses are toxic; if digitalis be indicated in pneumonia, great judgment and caution should be exercised not to exceed doses which are safe.

Huchard, who is also a partisan of the treatment of pneumonia by digitalis, prefers crystallized digitalin to the crude drug in any form, and would give only one moderately large dose in the twenty-four hours. He also gives digitalis to obtain the roborant effect of this drug on the pneumogastric; why he should prefer digitalin (which is regarded by many authorities as a very uncertain preparation) is not very manifest. Huchard, however, says that he has always obtained certain results from Petit's preparation. He would limit the use of digitalin principally to influenzal pneumonias, which are conceded by all authorities to be asthenic in their nature, demanding from the first supporting treatment. Doubtless these asthenic pneumonias require from the onset different treatment from ordinary acute, sthenic pneumonia. The typhoid element early manifests itself; practitioners in this country, as elsewhere, almost by instinct give stimulants, as alcohol, quinine, and carbonate of ammonia, and keep shy of the so-called antiphlogistics.

When, however, we come to acute pneumonia in healthy subjects, we do not, in the estimation of excellent physicians of great experience in this country, find indications for a stimulant treatment from the very first, much less for digitalis in any form. These men will tell you that they see no reason to stimulate the heart; it is already too much stimulated by the fever poison, and is pumping blood too fast and too much of it into the inflamed lung. It is better treatment, they contend, to follow out a line of medication that is calculated *to allay both cardiac and peripheral excitement.* This indication is exactly fulfilled by veratrum viride, and in a measure by ipecac, antimony, Dover's powder, nitrites, etc. Dr. Boardman Reed, in the Therapeutic Gazette for April, has ably summed up the therapeutics of acute pneumonia, and has given results obtained by the sedative treatment which compare favorably with those of Petresco above mentioned or any other writer. His favorite combination in acute lobar pneumonia is the following:

℞ Tr. verat. virid., ♏xvi.
Vin. antim., ʒ j.
Tinct. opii deodor., ♏xx to ♏xxx.
Liquor ammon. acet., q. s. ad ℥ iv.

M. Sig. Two teaspoonfuls every two hours day and night.

For some reason, physicians in this country are generally partial to veratrum viride in pneumonia, and think that they obtain from this drug very satisfactory results. It is supposed to act by its sedative action on the heart, whereby less blood is sent to the inflamed lung, and by lessening peripheral resistances, whereby a general vaso-dilator action is obtained which benefits the inflamed lung by draining off blood into other organs; "it bleeds a man into his own abdomen," to use an expressive remark of H. C. Wood apropos of the antiphlogistic action of this drug. The so-called vascular stimulants—heat, alcohol, nitrous ether, Dover's powder, acetate of ammonia—are all valuable accessory remedies, equalizing the circulation, opening the cutaneous and renal emunctories, and diminishing the congestion of internal organs.

In Dr. A. H. Smith's valuable contribution to the rational treatment of pneumonia (American Journal of Medical Sciences, Nov., 1890) we find no reference made to digitalis, or, if mentioned, it is mentioned only to be condemned. In this paper the writer forcibly expresses the indications for treatment when he says: "Increasing obstruction with decreasing right heart power means death; decreasing obstruction with sustained right heart power gives promise of recovery. It is a question with which the left heart has almost nothing to do, for the peril is not from general exhaustion, as, for example, in fever, nor from failure of the heart as a whole, as in some cases of infection; but specifically from tiring out of the right heart in its effort to unload the venous circulation through the obstructed vessels of the lungs."

The logical conclusion to be drawn from

this is to administer remedies that relax the arterial system, and by increasing its capacity we relieve the veins proportionately; by diminishing the venous engorgement we relieve the respiration and lighten the labor of the right heart. Among remedies that relax the arteries may be mentioned aconite, alcohol, and especially the nitrites of sodium and potassium. And regarding nitro-glycerin, which also possesses this property, Dr. Smith says: "Again and again I have seen a patient with pneumonia somnolent, or even comatose, with the face gray, the lips livid, the respiration superficial and from 50 to 60 per minute, and the chest everywhere full of moist râles, but nevertheless rescued from this apparently hopeless condition by drop doses of a one-per-cent. solution of nitroglycerin administered every fifteen or thirty minutes."

In an editorial comment on this paper which appeared in the Medical Record the writer, after a short discussion of the paper, says: "Dr. Smith's contribution to the therapeutics of pneumonia is the best that has been made for years, yet he makes no allusion to antipyretics or baths." The inhalation of oxygen certainly gives the patient that element of the air which he particularly needs in all cases of obstruction to the respiration, and in all grave cases it can be given with benefit. Digitalis, which is so frequently given in this disease, is mentioned only to be condemned. Nor is Dr. Smith alone in this opinion, for Loomis says that in pneumonia digitalis does more harm than good. By its powerful action on the left ventricle a still greater quantity of blood is forced into the already overloaded venous system, thereby defeating one of the main conditions aimed at in the treatment, viz., the relief of the pulmonary and venous engorgement and the equalization of the circulation.*

THE TREATMENT OF INEBRIETY.

The Times and Register has a number devoted to the treatment of inebriety, which contains several striking articles.

Dr. Harold N. Moyer discusses the question whether inebriety is a vice or a disease, and concludes that it is a disease, rendering the victim "in a measure irresponsible." He does not believe that there is any specific treatment for inebriety, or that there is any drug or combination of drugs that will relieve the craving for liquor, except such as are themselves intoxicants or produce in large doses a marked toxic effect, like strychnia, atropine, and other alkaloids. Such drugs as coca and cinchona are indicated, but should not be given in doses that shall in any way make them substitutes for the alcohol that is withheld. Hot baths tranquillize the nervous system and aid elimination; chloral, bromides, and other sedatives are useful to produce sleep. He adds that "these patients ought to be kept busy as much as possible during their treatment. Medicines should be given often and in small doses, and the baths frequently repeated. It is astonishing sometimes what a wonderful effect a small bottle of a comparatively innocent drug will have in allaying the thirst for liquor, provided the patient is told with sufficient earnestness that it is given for that purpose." He affirms that the home treatment of inebriety, like that of insanity, is in general unsatisfactory.

Dr. Edward C. Mann, of London, England, gives an account of his personal experience in the treatment of inebriety. Those persons who have inherited the neuropathic diathesis are the ones in whom the disease of inebriety and dipsomania is the most easily established. "When the disease is fairly established, the craving for alcohol, which comes on daily, weekly, or monthly, perhaps, is perfectly uncontrollable by the patient." Inebriety being a disease which paralyzes the will, the victim must be put under restraint, if he would be cured. One cause of failure to cure the disease permanently is the great difficulty in keeping the patients long enough under treatment. A period of from six months to a year is little time enough. The lost will power must be restored, and the uncontrollable craving for alcohol removed, and this means building up the entire nervous system. Dr. Mann reports three cases occurring in his practice where confinement for several months within a suitable institution, rest in bed under the

* "On the Therapeutics of Croupous Pneumonia;" by Dr. H. L. Jenckes, Hazel Green, Wisconsin, in the Medical Record, Dec. 19, 1891.

care of a trained nurse, the frequent administration of suitable nutrients, tonics, and sedatives, with other measures, brought about a perfect restoration. Among the foods which he has found useful are meat juice, hot milk, and lactated food. He relies much on prolonged warm baths, with cold to the head to quiet the nervous system; while to promote sleep and further contribute to the soothing effects of the bath, hydrobromate of hyoscine in the dose of $\frac{1}{60}$ grain is given hypodermatically. This course of treatment is kept up for a few days, and then, after the digestive system has returned to its normal condition, the patient is allowed full diet, and central galvanization and general faradization are employed to invigorate the nervous system. Maltine with hypophosphites is given, and iron, quinine, and strychnia administered in combination as a tonic. Plenty of out-door exercise with an attendant is prescribed, and cod-liver oil in emulsion given freely. It has been very seldom found necessary to allow temporarily any alcoholic stimulant.

Dr. Mann is somewhat radical respecting the moderate use of alcohol, and affirms that "the moderate, daily use of alcohol, if continued long enough, dims the intellect, paralyzes the will, and lowers the moral sense." "Change of character is the ultimate symptomatic expression of inebriety; change of mental conduct, the immediate; and repetitions of conduct make character." "Finally, in such a man or woman, the end will be that psychical function will cease, because of the cessation of the psychical cell-life of the cerebral substratum of mentality."

Dr. J. T. Searcy, of Tuscaloosa, Ala., urges the importance of the establishment of suitably equipped inebriate asylums, "whose object shall be to place the brain at rest as much as possible, and at the same time to give muscle-exercise." In the institution with which he is connected "a large majority of the male patients work out every day, grading the grounds of the institution with wheelbarrows and doing farm work." He adds: "An inebriate asylum to which persons could be sent by due process of law could be made largely self-supporting by well arranged manual labor, and the patients from such an institution would come out much more permanently benefited than by any amount of medicinal treatment. Trials by jury could be legalized for such cases, and inebriates should be committed to such institutions for terms in no case less than twelve months."

James G. Elliott writes (evidently from personal knowledge) of the notorious Keeley cure: "The treatment consists in the use hypodermatically, five times a day, of a solution which shows an analysis of:

Strychnia sulph., ½ gr.
Atropia, ¼ gr.
Acid boracic, xv gr.
Aquæ dest., ℥ iv.

The formula of the tonic taken by the mouth is:

Ammon. muriat, j gr.
Aloin, ij gr.
Tinct. cinchon. co., ℥ iij.
Aquæ dest., ℥ j.

M. Sig.: Teaspoonful every two hours while awake.

"During the initial treatment—for the first one, two, or three days—much heavier injections of atropia are given in combination with morphia. Any physician will know at a glance that the quantity of strychnine used is so minute, considering its relative potency, that it can have little effect in modifying the action of the atropia, The tonics support, to a degree, but they, too, have little influence in controlling the symptoms produced by the atropine." This writer declares that he knows many men, in good standing in "bichloride of gold" clubs, who are sick and worthless—"they are injured and dragging out a miserable existence from the effects of the Keeley drugs. Most men will endure much, even death itself, rather than return to their old habits, and it cannot be said that men are restored to health because they have not relapsed."

For other articles in this number (by Dr. Lucius W. Baker, Dr. E. Chenery, Dr. J. Lucius Gray, and Dr. Thomas J. Mays) we have not space for more than a passing notice. Dr. Gray at his Sanitarium at La Pointe, Indiana, attempts a systematic treatment which, from the amount of drugging, somewhat resembles that of the Keeley institutes. He declares that total prohibi-

tion of alcoholics for long periods of time will not suffice. The patient that enters his Sanitarium is put under no restraint. Whiskey is put in his room in liberal quantity, generally a pint at a time. He is urged to drink all he wants to, and a bottle remains in his room throughout his stay in the institution. "The bowels are freely opened by means of cathartics and mineral waters. The diet for the first few days is confined to soups, milk, and the cereals, after which a liberal diet of meat and vegetables is allowed. Plenty of exercise is insisted on. For the insomnia, either chloral or bromide of sodium combined with digitalis, or the hydrobromate of hyoscine is given. The purely medicinal part of the treatment consists in the administration hypodermatically four times each day of the chloride of gold and sodium and nitrate of strychnia, pushing the combination till the full physiological effects are obtained. The requisite dose being ascertained by the symptoms produced, the drugs are administered for a sufficient length of time to produce an apparently normal condition of the nervous system. The quantity is then gradually diminished until the patient is once more himself. During all this time, the patient takes every two hours, when awake, a preparation of strychnine, atropia, gold, cinchona and coca, the quantity of each being adapted to individual cases. This plan of treatment is kept up from four to six weeks."

Dr. Gray affirms that during the past three years he has treated in the Sanitarium nearly three hundred inebriates, and thus far only three cases have relapsed. None of these cases were under treatment longer than six weeks.

Dr. Mays affirms that, in the treatment of inebriety, rest, a supply of nutritious food, and active supporting treatment yield the best results. Large doses of strychnine and capsicum are indicated, and he recommends as especially useful the following formula:

℞ Strychniæ sulph., j grain.
Atropinæ sulph., $\frac{1}{32}$ grain.
Pulv. capsici, x grains.
Quiniæ sulph., xx grains.
Phenacetin, xl grains.

M. Ft. Capsulæ No. xx. Sig.—One capsule four times a day.

Book Notices.

THE JUNE COSMOPOLITAN.

This magazine is leading a movement for the solution of the problem of aërial navigation, and Hiram S. Maxim, the great inventor and foremost authority on the subject, gives the result of some recent experiments under the title, "The Aëroplane."

St. George Mivart begins a series of papers in the June Cosmopolitan, in which he will set forth the conclusions he has reached in regard to the great theory of natural selection and its philosophical bearings upon the religious thought of the day.

The June number opens with a charming Philadelphia story by Janvier, with artistic illustrations from Wilson de Meza.

Miss Hewitt, daughter of ex-Mayor Hewitt, gives some very sound advice regarding Fashions and Counterfeits in Bric-a-Brac.

The fiction includes a mystical and peculiar story by Howard Pyle, the well-known illustrator, accompanied by two fine pictures of his, and "Maw," a rather striking character of slave life. Other articles in this number are: "The Working of the Labor Department," by the Commissioner of Labor, Carroll D. Wright; "Fur Seals in Alaska;" another sonnet of James Russell Lowell, and a poem by Inigo Deane, with a full-page illustration from the pen of Will Low. Also the poem, "Mystery," by Amelia Rives. Among artists employed to illustrate this number are Kenyon Cox, H. Siddons Mowbray, Will H. Low, Wilson de Meza, Walter Crane, Howard Pyle, and E. W. Kemble. Murat Halstead, Brander Matthews, and Edward Everett Hale are among the other contributors.

CONTENTS OF SCRIBNER'S MAGAZINE FOR JUNE.

On the Great Cattle Trail. Frontispiece. Drawn by A. Castaigne; engraved by G. H. Del'Orme.

An Ascent of Mount Ætna. By A. F. Jaccaci. With illustrations by the author; engraving by Van Ness, E. H. Del'Orme, J. Clément, and W. Miller.

The Return of the Year. By Archibald Lampman.

The Drury Lane Boys' Club: What It Grew From. What It Is. What We Hope It Will Be. By Frances Hodgson Burnett.

The Priceless Pearl. By John W. Chadwick.

Historic Moments; A Memory of the Chicago Fire. By David Swing.

After Sunset. By Graham R. Tomson.

Life in New York Tenement-Houses. As Seen by a City Missionary. By William T. Elsing. [The third article in the series on "The Poor in Great Cities."] With illustrations by Charles Broughton and O. H. Bacher; engraving by Peckwell and Schussler.

The Reflections of a Married Man—Chapters IX.–X. (Concluded.) By Robert Grant.

Cattle-Trails of the Prairies. By Charles Moreau Harger. Illustrations by A. Castaigne; engraving by Van Ness, Witte, C. I. Butler, Chadwick, and E. H. Del'Orme.

Rapid Transit in Cities—II. The Solution. By Thomas Curtis Clarke. Illustrations by O. H. Bacher, H. T. Schladermund, and Hughson Hawley; engraved by Witte.

Sea-Beaches. By N. S. Shaler. Illustrations by J. H. Twachtman, V. Pérard, and G. Véron; engraving by C. I. Butler, McCann, E. H. Del'Orme, and Geo. Del'Orme.

The Wrecker—Chapter XXIII. By Robert Louis Stevenson and Lloyd Osbourne. (Begun in August, 1891—to be concluded in July.) With a full-page illustration by W. L. Metcalf.

The Point of View. Business as an Occupation—No New Thing—The Accomplishment of an Agreeable Deafness—Night-Cap Books.

TALES FROM TOWN TOPICS. No. 4. June, 1892. Published at 21 West 23rd Street, New York. Price, 50 cents.

There is a mistaken impression that "Tales From Town Topics," although clever, bright, witty, and not infrequently wise, are a little too much akin to modern French literature to be proper reading for a serious people. This is a mistake, as any one will discover who reads the stories in question.

Every one knows how difficult it is to write a really effective short story. In fact, next to the task of producing a successful child's book, the art of the "short story" writer is considered the most difficult of literary labors. Such being the case, the publication in a year of four such good volumes of short stories as compose the "Tales From Town Topics" is to be commended.

The publishers of "Tales From Town Topics" have evidently exerted themselves to infuse all the freshness and fragrance of the month of roses into this volume. There are many stories in which the captivating characters are placed in an environment of summer scenes, with the sea or mountains for a background, and the poetry and wit of the volume all contain more or less of the gay and vernal spirit that characterizes nature in this season of pleasurable pastime.

THE MEDICAL REGISTER AND DIRECTORY OF THE INDIAN EMPIRE FOR 1892. James R. Wallace, M.D., Editor and Publisher, 150 D. Laramtala Street, Calcutta, India.

This is the first attempt that has been made to prepare a register and directory of the medical men of the Indian Empire.

Its purpose, which its compiler has acceptably achieved, is to clear the way for a system of State regulation of medical practice in India, and by means of such a register to accentuate the need and exemplify the feasibility of a proper scheme of medical registration.

To create an *esprit de corps* among the scattered members of the profession in the Indian Empire by placing them in definite knowledge of one another's existence.

To devise a reliable means by which communication may be readily established in all matters that concern the progress and advancement of the medical profession.

The author has supplemented the purely directorial part of this work by a varied fund of medical information.

CONTENTS OF JUNE NEW ENGLAND MAGAZINE.

Art in Chicago; by Lucy B. Monroe. The Government of Cities; by Moorfield Storey. Work and Wages; by Charles Edwin Mark-

ham. General Armstrong and the Hampton Institute; by Edwin A. Start. The Squire's Niece Maria; by Mary F. Haynes. The Ship Columbia and the Discovery of the Oregon; by Edward G. Porter. A Poor Millionaire; by Mary L. Adams. Ye Romance of Casco Bay; by Herbert M. Sylvester. The Blue and the Gray; by Zitella Cocke. The Christian Endeavor Movement; by Rev. Francis E. Clark, Amos R. Wells, John Willis Baer. Apple Blossoms; by Maud Wyman. Broken Measures; by Sarah Knowles Bolton. Three Letters to "Dorothy;" by Henry Collins Walsh. The People in Church and State; by Edward Everett Hale.

"Food" for June. Published by the Clover Publishing Co., 71 and 73 Park Place, New York. Price, $2.00 a year. Single number 20 cents.

"Food" for the month of June is ready, and the publishers of this new and unique magazine have spread a delicious repast. The ornamental phases of the gastronomic art and the more serious and scientific questions of the dietary are pleasingly blended in the make-up, the result being an attractive number.

Among the more prominent features are: "Camp Kitchens and Camp Cooking," by David A. Curtis; "Vegetarianism: its Beauties and Benefits," by Carvica La Favre; "Infant Feeding," by Elizabeth Robinson Scovil; "Possibilities of Strawberries," by F. N. Barrett, showing many ways of preparing this luscious fruit for the table.

Essentials of Aseptic Surgery. By Dr. C. Schimmelbusch, Assistant to Prof. E. Von Bergmann, in the Imperial Surgical Clinic of the University of Berlin. Authorized translation, with additions by F. J. Thornbury, M. D., late Senior Resident Physician at the Cincinnati Hospital. 28 Illustrations and an Introduction by Professor E. Von Bergmann.

This book is announced by W. B. Saunders, 913 Walnut Street, Philadelphia, as in preparation—to be ready early in the fall.

Notes and News.

Amœba's Lover—.

A neat bacillus, with rounded ends,
Was seen, by means of a powerful lens,
Moving with undulatory grace
Through a fashionable lymphatic space.

His graceful appearance would take with some
As he picked his teeth with a flagellum,
Tho' he flirted in a way to shock us
With every common gonococcus.

From his manners good it was revealed
That he had been through a fine culture-field;
But his tailor's efforts were all in vain
To collect a bill for this germ's membrane.

His mind was filled one might say wholly
With thoughts of sweet Amœba Coli;
Her mobile form, 'twas his conjecture,
Languished within the sigmoid flexure.

So, hurrying through an abscess rancid
To an artery of rapid transit,
He took, in a dépôt of congestion,
A blood-disc bound for the large intestine.

In a parlor car he chanced to see
A plasmodium malariæ.
A pretty picture she seemed to make
As she fed her spores on ague-cake.

And then he thought of the bliss in store—
Of Amœba and a baby spore!
And how they'd dwell in a saccule neat
In a calm and scybalous retreat.

But just as he reached Amœba's door
He heard a protoplasmic roar,
And there, repulsive in his might,
Was a hungry, savage phagocyte.

His mouth was large and his words profane,
So our hero drew his good ptomaine.
"Swish! snap!" went a pseudopodic jaw,
And "gulp" went a phagocytic maw.

Then his mistress saw a vacancy
Where her loved bacillus used to be;
And Amœba, with a doleful shiver,
Went far away to the dismal liver.

—*Exchange.*

The Profession at the World's Fair.—

The World's Fair Entertainment Committee of the Medical Profession of Chicago has undertaken preparations for extending hospitality to members of the profession visiting the World's Fair, by means of medical headquarters, and in exceptional cases by the giving of banquets and receptions. The following reported themselves as permanently authorized to act for their

respective societies: Dr. John E. Owens, Dr. A. E. Hoadley, and Dr. J. B. Murphy, representing the Chicago Medical Society; Dr. Harold N. Moyer, Dr. D. R. Brower, and Dr. C. W. Earle, representing the Practitioners' Club; Dr. William E. Clark, Dr. C. D. Wescott, and Dr. A. H. Foster, the Pathological Society; Dr. J. H. Etheridge, Dr. F. E. Waxham, and Dr. L. L. McArthur, the Gynæcological Society; Dr. T. T. Nelson, and Dr. Archibald Church, the Medico-Legal Society; Dr. J. C. Cook, Dr. H. H. Deming, and Dr. Milton F. Coe, the South Side Medical Society; and Drs. Hektoen, Winthrow, and Holmboe, the Scandinavian Medical Society.—*New York Medical Record.*

Lines to a Tapeworm.—

Pale wanderer from thy native place!
O exiled prince abdominal!
I would commune with thee a space,
Thou fiend abominable.
Thou wiggler of intestinal coil,
Who tænia solium art hight,
Thou worker of so much turmoil—
Hermaphrodite!

Why didst thou dwell in human gut,
Thou chain of many links?
Why didst thou not release thy foot
For numerous drinks?
Couldst thou such pleasure then derive
From iliac folds replete,
Whilst there in luxury thou didst thrive,
Cestoidean beat?

And mulishly thou didst refuse
To writhe away in flight,
And leave that mucoid, villous ooze,
Thou pallid parasite.
With household gods all round about,
Thou stayed in statu quo, I ween,
Until we quickly fired thee out
With pelletierine.

Methinks e'en then thou hadst preferred
In the duodenal home to nap,
Hadst thou not feared some doctor churl
And his worm-trap.
But now, praise Bacchus! for thy fall
Let hallelujahs ring
And alcohol surround thy pall
Forever, damned thing.

—*The Corpuscle*, May, 1892.

The Bacillus of Eclampsia.—

The Deutsche medicinische Wochenschrift of May 12th contains the announcement that Dr. Gerdes, first assistant in the Pathological Institute of the University of Halle, has in a severe case of eclampsia succeeded in demonstrating by culture the presence of a short bacillus in the liver, lungs, and kidneys, and also in the blood. This bacillus is extremely virulent when inoculated in rats and mice, causing convulsions in the latter. In all the animals experimented on coma set in, the respiration became shallower, the body temperature became subnormal, and death occurred in a short time. In guinea-pigs convulsions only came on after intra-venous injections (the jugular vein was selected for the purpose); subcutaneous and intraperitoneal injections produced no such effect. The bacilli referred to were found in great numbers in the lungs, kidneys, and liver of patients suffering from eclampsia, especially in the form of bacillary emboli, the starting point of which was probably a primary focus in the placenta. Dr. Gerdes promises a preliminary communication on the subject without delay.

Illumination of the Stomach.—

Renvers (Münch. med. Woch., April 12, 1892) recently demonstrated to the Berlin Medical Society an apparatus which consists of a small Edison's lamp fixed to the end of a bougie and covered by a small glass case filled with water. The electric current is obtained from a battery of twenty cells. If the stomach is full of food, illumination is impossible; but if it is quite full of water when the lamp is passed into the stomach, an illuminated area is seen which corresponds exactly to the limits of the organ. The apparatus can only be used in the erect posture, when the greater curvature is usually seen a little below the level of the umbilicus. Abnormal dilatation of the stomach can be readily detected, and a case of carcinoma of the organ has been diagnosed by the use of this apparatus, the diagnosis being confirmed by post-mortem examination. The tumor appeared as a dark spot in the light field.

Experiments with Snake Poison.—

An opportunity has arisen—in connection with the construction of a new and improved snake-house at the Calcutta Zoological Gardens, which will contain specimens of all the

principal poisonous snakes in the country—of making experiments in a systematic manner with snake poison for scientific and practical purposes. It is proposed to fit up a small laboratory in connection with the snake-house for the purpose of prosecuting inquiries bearing upon the pathology of snake-bite and cognate subjects and of testing by experiment the various alleged remedies for snake-bite which are from time to time brought to notice.—*The Lancet.*

Immunity Against Pneumonia.—

Drs. G. and F. Klemperer (Berliner klin. Wochen.) have found that any nutrient medium in which the pneumococcus has grown, even after removal of the coccus itself by filtration, confers immunity against the pneumococcus-septicæmia. They also found that exposure to a temperature of 60° to 65° C., for one or two hours, made the immunizing solution more efficacious. The authors consider that the blood serum of protected animals renders harmless the poison (pneumotoxin) formed by pneumococci and so, if introduced into the circulation, cures pneumonia already in progress.

A Bronze Monument to Dr. Marion Sims.—

A full-length figure of the late Dr. Marion Sims has been executed in bronze by the eminent sculptor, Ferdinand von Müller, of Munich, and will shortly be formally presented to the City of New York and set up in the Central Park. The figure, which is nine feet high, stands on a pedestal of granite eight feet in height. The counterfeit presentment of the distinguished gynæcologist is said to be at once life-like in its fidelity to nature and touched with rare artistic grace.

To Measure the Capacity of the Stomach.—

Forlanini measures the capacity of the stomach by passing a sound and distending the organ with air introduced at a known pressure, about seven centimetres of water. The air is then withdrawn and its volume measured. By this means the result of treatment can be definitely ascertained.—*Boston Medical and Surgical Journal.*

Therapeutic Brevities.

The Therapeutic Value of Suppuration.—Fochier has observed that in some cases of puerperal infection, when there is no important appreciable lesion, a sudden amelioration not rarely takes place coincidently with the appearance of a focus of suppuration in the iliac fossa, in the breast, in the subcutaneous cellular tissue, or about a joint. The thought suggested itself that in suitable cases the establishment of suppuration by the subcutaneous injection of essence of turpentine might be a rational procedure; and in a number of cases successful results were by this means obtained. Governed by the same simple principle, Lepine and Dieulafoy each employed the injections in a desperate case of pneumonia, with a fortunate termination. About fifteen minims were injected in each situation selected. Suppuration took place in the course of a few days, but it was unattended with elevation of temperature, and the pus was aseptic.—*L'Union Médicale*, No 39, 1892, p. 465.

Effects of Medicated Inhalations.—Dr. A. Irsai, of Buda-Pesth, has made some instructive laboratory observation on the effects of the inhalation of various substances on the lungs and air-passages. From these observations Dr. Irsai concludes that in acute catarrhal affections with swelling, hyperæmia, and profuse secretion, substances should be selected for inhalation which produce anæmia, and that in chronic torpid conditions, or in phthisis where the supply of blood and the nutrition of portions of the lung are defective, substances which induce hyperæmia should be used. Of course it is needful to exercise due vigilance in employing creasote or guaiacol in cases where there is any tendency to hæmorrhage.

Iodoform Vapor in Whooping-Cough.—At a meeting of the Société Médicale des Hôpitaux on July 17th, (Rev. gén de Clin. et de Thér., July 22, 1891), M. Chantemesse read, in the name of Dr. Chibret, of Clermont-Ferrand, a communication on the effect of iodoform vapor in the treatment of whooping-cough. The method consists in sprinkling the room in which the patients live with iodoform. Under this treatment children presented a marked diminution in the frequency of the paroxysms, and the duration of the disease was shortened. No symptoms of the poisoning were observed.

The Treatment of Burns.—Dr. Capitan, in Médicine Moderne, recommends the application of the following ointment:

Salol, 4.0.
Cocain. mur., 0.25.
Vaselin, 30.0.

After careful disinfection of the wound with solutions of boric acid or sublimate (1:2000) and the opening of bullæ, the entire area is covered with a thick layer of the ointment. Over this is placed a dressing consisting of thin layers of cotton moistened in a 1 to 2,000 sublimate solution and wrung dry, and then a piece of rubber tissue and a bandage. This dressing is changed every two or three days.

Euphorbia Pilulifera in Hay-Asthma.—E. S. Blair (Therapeutic Gazette, March, 1892) records a troublesome case of hay-asthma in which administration of a fluid extract of euphorbia pilulifera gave the happiest results. The patient was a child of 10 years, who every August suffered from attacks of the disease. While administration of the usual remedies altogether failed to procure relief, the new drug was rapidly successful, not only against the primary attack, but in cutting short any recurrence of the affection. The same writer also mentions terebene as a useful drug under similar circumstances.

Iodoform Sponges; Their Preparation.—The following is the method of Haug (Nouv. Rem.): Small, soft, cleansed sponges are immersed for five days in water to which five per cent. of hydrochloric acid has been added; after which they are thoroughly washed in an abundance of water, and dried. They are then placed into a 7½-per-cent. ethereal solution of iodoform; the ether is allowed to evaporate, which being completed, the sponges are preserved in well-stoppered bottles.

A Deodorant.—When, in case of carcinoma of the uterus, a deodorant is required, the following combination will prove useful:

℞ Acid. salicylic., gr. viij.
Sodii salicylat., ʒ iij.
Tinct. eucalypti, f ʒ vj.
Aquæ destillat., f ℥ vj.

M. S.—Three tablespoonfuls are added to a pint or two pints of water, and used as a douche every three or four hours.

Permanganate of Potash in Chronic Urethritis.—Chronic urethritis is treated by Dr. A. G. Gerster, of New York, by injections of 1:2000 solution of potassium permanganate, carried to a point between the sphincter of the bladder and the cut-off muscle.

A marked improvement usually quickly follows, and on the degree of improvement depends the frequency with which the applications should be made.—*Medical Mirror.*

Viburnum Prunifolium in Dysmenorrhœa.—Dr. Joseph (Wiener med. Presse, No. 16, 1892) speaks highly of viburnum prunifolium in the treatment of mechanical or obstructive dysmenorrhœa. He begins with the remedy fourteen days before the appearance of the menses, giving twenty to twenty-five drops of the fluid extract ten to fourteen days before the appearance of the menses and during their continuance, four times a day.

Treatment of Dysentery.—

Salol, ʒ j.
Syrup of tolu, ʒ ij.
Extract of opium, grs. ij.
Cognac, ʒ j.
Gum water, ℥ vij.

A teaspoonful every hour.

—*Medical Press.*

Earache.—Take five parts of camphorated chloral, thirty parts of glycerin, and ten parts of oil of sweet almonds. A piece of cotton is saturated and introduced well into the ear, and it is also rubbed behind the ear. The pain is relieved as if by magic, and if there is inflammation it often subsides quickly.—*Medical Brief.*

Salol as an Intestinal Antiseptic.—

Salol,
Bismuth salicylate,
Sodium bi-carbonate,
} ää 4 grammes (1 drachm).

Dispense in 12 cachets—One before breakfast and dinner.

—Dujardin-Beaumetz in *Nouv. Rem.*

Furuncles—.An ointment of one part red oxide of mercury in one hundred parts of lanolin is said to be very efficacious in aborting furuncles. It should be rubbed in for three or four minutes at a time, once or twice a day. The same application is useful in panaritium.—*Medical Record.*

Medical Progress.

Powdered Beef as a Food in the Treatment of Pulmonary Consumption.—The question of feeding is one of overshadowing importance in the treatment of pulmonary consumption, and any food preparation which adds even a seeming advantage in this respect is worthy of the attention of the clinical investigator. For some years I have been interested in beef products as food, and about six months ago I began to study the clinical effects of powdered beef, known under the name of Mosquera's beef-meal, in pulmonary consumption, both in hospital and in private practice, and I take this opportunity to present the impression which I gathered from its use.

Mosquera's beef-meal is fresh lean beef, digested and preserved with pineapple juice, then dried and powdered. It has no pronounced disagreeable odor, is free from bitter taste, and is somewhat soluble in water. It is believed to represent all the constituents of fresh lean beef in a predigested state. As it comes from the manufacturer the powder is in a pure state, or mixed with equal parts of powdered chocolate and sugar. It may also be mixed with sweetened hot coffee or milk, or with an egg-nog. Frequently a little wine, brandy, whiskey, or rum may be added with advantage. It may also be administered with all kinds of broths and soups. The quantity which may be given varies from a dessertspoonful to a tablespoonful of the raw powder, four or five times a day. When it is served in hot coffee, cocoa, or milk, it must be well stirred up and mixed.

I have given this preparation in all the varied forms and conditions of pulmonary consumption that came under my notice during the period of observation, and from this experience I believe that I am justified in drawing the following conclusions:

1. *It is Palatable.*—No patient refused to take it. Most patients, however, preferred it mixed with chocolate. When the powdered beef, mixed with chocolate, is used as it comes from the manufacturer, it must be remembered that one-third only of the bulk is beef powder, and that the balance is made up of equal parts of cocoa and sugar, and that three teaspoonfuls of this product represents, therefore, only one of beef-powder.

2. *It is Digestible.*—One of the most important points in the feeding of consumptive patients is the administration of that food which requires the least amount of energy on the part of the stomach to digest it. This consideration has long stimulated the desire to supply these patients with food in the most concentrated form, such as in beef-pulp, in freshly-expressed juices of beef, oysters, etc., which are not only readily digested, but just as readily absorbed and assimilated. I believe that beef-powder is equally digestible, for, so far as I have learned, it has not given rise to gastric disturbances of any kind.

While my experience has taught me the excellency of the fresh juices of beef, oysters, etc., in the treatment of the disease under consideration and in others which are allied to it, it has also shown me that, at least in some instances, they cannot be taken for a protracted period without producing revulsion on the part of the stomach. So far as I know, this is not the case so often with the beef-powder; for I have given it to patients, in dessertspoonful doses, every four hours, daily, for three months, without any intolerance. If desirable, the two foods can practically be given at the same time, and, where there is reason to fear that the patient may tire of both, the physician may advantageously alternate between the two, every second, third, or fourth day.

3. *It is Nutritious.*—In forming an estimate of its nutritive value, I am, of course, wholly guided by the clinical results which followed its administration. In most cases the patients improved in weight and gained in strength. In some cases the increase in flesh and the change from other food to the beef-powder were too intimately associated to be ascribed to anything else than to the greater food value of the latter preparation. I gave it to a few cases in which no increase in flesh took place, but this may probably be accounted for on the score of their hopeless state.

4. *It Aids the Digestion of Other Foods.*—It is not only of easy digestion, but it seems to help the digestion of other foods. This property is of special value in the treatment of intestinal tuberculosis, where the surface of the stomach and intestinal canal is in a state of hyperexcitability, and where food, which in health is a normal stimulant, produces excessive peristaltic action, and consequently diarrhœa. Any agent, therefore, which enhances the breaking up and the digestion of food is of great service in the treatment of this condition.—Thomas J. Mays, M.D., in *Therapeutic Gazette*, May, 1892.

Treatment of Dysentery.—Drs. Lardier and Pernet (Semaine médicale) recommend the following treatment of dysentery—one which they have employed with the

greatest success in the recent epidemic at Rambervillers, Vosges.

It is based on intestinal antisepsis, either by means of salol or, better still, iodoform. The former is prescribed in the following formula:

Salol, gr. xlv [3.0 grammes].
Tolu tincture, fl. ʒ iiss [10.0 grammes].
Quince syrup, fl. ʒ vi [30.0 grammes].
Opium extract, gr. iss [0.1 gramme].
Mucilage acacia, ʒ iv [150.0 grammes].

Tablespoonful hourly.

This medication is reported to act in a very favorable manner on the morbid process. However, the medicament which was found to have truly remarkable effects in dysentery is iodoform, in the daily dose of 30–40 centigrammes [4½–6 grains]. The following formula is given:

Iodoform, gr. xv [1.0 gramme].
Powdered opium, gr. ix [0.6 gramme].

For 20 wafers—5 or 6 during the day, at equal intervals.

These wafers soon produced marked relief in the authors' cases.

The incessant and extremely violent tenesmal pains were calmed by boric acid enemas; but the best means of combating them was found to be the use of suppositories of the following composition:

Cocaine hydrochlorate, gr. vi [0.4 gramme].
Powdered opium, gr. ix [0.6 gramme].
Cacao butter, ʒ ii [8.0 grammes].

Divide into 4 suppositories, 1 morning and evening.

Under the influence of the cocaine, the griping disappeared as if by charm, the diarrhœa ceased, and the patients obtained a refreshing sleep of several hours' duration.

Besides the use of the medicaments mentioned, it is advised not to neglect washing out the intestines several times daily with some antiseptic fluid—such as a concentrated solution of boric acid, or a 1:5000 solution of corrosive sublimate.

HEART PAIN.—The statement is often made to patients who complain of pain about the heart that it is due to the pressure of the stomach when distended with food or gas. It is unquestionably true that many who think they have heart disease are in reality dyspeptics, but it is equally well known that many conditions produce painful sensations of various kinds in the heart itself, and when intercostal neuralgia, myalgia or muscular rheumatism of the chest-wall, cutaneous hyperalgesia, and localized pleuritis have been eliminated, there still remain a considerable number of causes for pain in the heart region. Nothnagel has recently made the attempt to show the causal relation between cardiac pain and actual disease of the organ, and has tabulated nearly five hundred cases of valvular disease with this object in view, excluding neuroses with precordial pain as well as instances of pericarditis. The result of his study of the question, which is published in the Zeitschrift für klin. Med., shows cardialgia to be frequent in cases of insufficiency and stenosis of the aortic orifice, while it is extremely rare in insufficiency of the mitral. Sixty per cent. of regurgitation in the former were found to be accompanied by pain, while only seven and a half of the latter cases had painfulsensations. Hyperalgesia of the skin localized over the region of the heart, even in the absence of spontaneous pains, was observed in a number of subjects. Attention is also called to the frequency of pain in disease of the heart muscle, without concomitant valvular implication, as in simple myocarditis, fatty heart, cardiac hypertrophy, etc.; but the cardialgia in these special cases has nothing especially characteristic about it, and is only frequent in instances of arterio-sclerosis with hypertrophy. The obscurity which involves the whole subject of the heart's nervous system prevents the author from entering upon a discussion of the pathology of these various pains, but he regards them as of much importance in the diagnosis of obscure cases.

Dr. Liégeois has recently reported to the Société de Thérapeutique several observations on the effect of the tincture of piscidia erythrina in certain heart-pains, and has been led by his own experience with the drug to regard it as a good analgesic in the more or less permanent pains of vascular cardiopathies. The effect of the remedy is said to be more analgesic than hypnotic, and it produces no gastric disturbances. It is said that its active principle, piscidin slows the heart's action and lowers the arterial pressure. It is very necessary to have a tincture prepared properly and not too long beforehand, as it does not keep well.

The formula which the writer especially recommends is as follows:

℞ Tinct. piscidiæ erythrinæ, 60 grammes.
Tinct. verat. virid., } ää 15 grammes.
Ext. aconiti rad. alc., }
S.: 30 drops morning and night.

It is greatly to be hoped that piscidia may prove a more valuable remedy for the relief of pain about the heart than many others which have been recommended for this pur-

pose. Some of these painful sensations are very distressing to the patient's mind as well as physically, and are not usually relieved by the remedies which act beneficially upon the action of the organ.—*Medical Record.*

Chloral as an Antiseptic.—We were recently consulted by a prominent surgeon regarding the best method of destroying the bad odor arising from an ulcerated surface on the body of a patient in one of the hospitals. Several agents had previously been used, some of which promptly subdued the odor, but caused untoward symptoms and had to be discontinued. Remembering that chloral, in contact with alkaline liquids, was split into chloroform and formate of the alkali, and thinking that the gradual and constant generation of chloroform would act as an efficient antiseptic, we suggested an aqueous solution of chloral. Accordingly a 10-per-cent. solution was at first used, which was afterwards increased to 20 per cent. The application was made by means of a piece of lint dipped into the solution and laid upon the ulcer for half an hour or less, according as the patient could bear it. It was then replaced by lint dipped into a weak solution. When the latter was found to be insufficient, the application of the strong solution was renewed. In this way a complete control could be kept over the effluvium from the ulcer, and the healing process was materially hastened.

In connection with the preceding we may state that, on theoretical grounds, we believe the application of a strong aqueous solution of chloral (perhaps with a little cocaine to subdue any pain caused by the application) would be a remedy very much worth trying in the early stages of diphtheria. Certainly a strong solution of chloral is an efficient bactericide.—*American Druggist.*

The Use of Hyoscine Hydrochlorate in Insanity.—MM. Ramadier and Sérieux (Les Nouveaux Remèdes, 1891, No. 21, p. 502) believe that in maniacal conditions, in the attacks of intense excitement, no matter what its kind is, this drug has rendered great service; simple mania, alcoholic delirium, epileptic delirium, excitement from very active sensory disturbances, excitement in certain cases of melancholia, maniacal excitement in general paralysis, symptomatic delirium of fevers, hallucinations of a maniacal type.

It is recommended to be used hypodermatically, dose $\frac{1}{20}$ (in very debilitated subjects) to $\frac{1}{15}$ of a grain. The effects are obtained within half an hour, and consist of mental repose, intellectual calm, soon followed by sleep, which lasts frequently twelve hours, with a further period of quiet. Cardiac lesions, Bright's disease, pneumonia, general paralysis, cachexia, have not seemed to be contra-indications to the use of hyoscine. The various accidents attributed to the use of this drug—delirium, collapse—appear to be due to impurities, none of which have been met with at the asylum of Vaucluse, in an experience of two years, covering more than two hundred cases.

Treatment of Painful Heart Diseases with Piscidia Erythrina.—Dr. Liégeois, in the Münchener med. Wochenschrift, Nov. 6, 1892, reports his experience with Piscidia erythrina. He was very successful in the use of the following mixture:

℞ Tinctura piscid. erythrin., 60.0:
Tinct. veratri viridis, }
Tinct. radic. aconiti, } ää 15.0.

M. Sig.—Thirty drops, morning and evening.

Acting more as an anodyne than as a soporific, Piscidia erythrina causes no gastric troubles, is laxative rather than constipating, and does not affect the function of the kidney. Its chief constituent, the piscidin, retards the heart-beat and reduces the arterial pressure. It is important that the root-bark be obtained from Jamaica, and that the alcoholic extract represent a twenty-per-cent. solution. In neurasthenia, hysteria, chlorosis, and with all persons who, without positive anatomical disturbance, suffer from so-called præcordial anxiety and cardiac oppression, the tinct. piscidiæ is of good effect.

The Hæmostatic Action of Arasá.—Observations made by several physicians at Monte Video have shown that arasá, a drug derived from a plant indigenous to Brazil and Uruguay, is an excellent remedy in metrorrhagia, and gives good results even in cases in which *Hydrastis canadensis* fails of success. The active principle of the drug is contained in the tuberosities of the root, and especially in the bark of the root, which is tolerably dense. Two grammes of this bark, boiled in a cup of water, are administered several days before and during the menses. The savor of the drug slightly recalls that of cascarilla. The authors have not observed objectionable secondary phenomena.

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Original Articles.

DUODECIMAL DOSAGE OF TOXIC MEDICAMENTS.*

BY E. TROUETTE.

The recent introduction into therapeutics of the different alkaloids and of a certain number of substances derived from the vegetable and mineral kingdoms has been the source of a great number of fatal accidents which I need not recall.

The toxicity of these different substances being very variable, there arises in the mind of the physician an inevitable confusion, which constantly presents to him the alternative of doses, inefficacious or dangerous, no human memory being sufficiently retentive to be relied on in the midst of so many fractions of thousandths and hundredths.

It is, accordingly, very important to physicians and patients that a new method of posology be contrived which shall overcome these difficulties—a method based on the rational division of the maximum dose which may be given to an adult in 24 hours.

In employing this method we need have no further fear either of errors in figures or lapses of memory, and physicians will find in it the following advantages:

1. Accidental intoxications need no longer be feared.

2. Dangerous medicaments may from the outset be given in an efficacious dose without the least risk.

I shall presently return to these two points. First, I would explain the mechanism of the method which I propose.

For the sake of clearness, I take the example of digitalin. At the moment of prescribing this substance, one cannot recall exactly the maximum dose in milligrammes which may be given to an adult in 24 hours; one's memory must be very trustworthy to justify the prescription of a dose of 1½ milligrammes, and it is, besides, necessary that chloroformic amorphous digitalin of the Codex be specified, for there are other digitalins—the crystallized digitalin of the Codex, for example, which may not be prescribed without danger in a dose beyond 1 milligramme. Adding to this the fact that, if the physician specifies nothing, the pharmacist must supply the chloroformic amorphous digitalin of the Codex, what, then, will be the result? Fearing to prescribe a toxic dose, we risk the giving of a quantity inadequate to the purpose in view.

All physicians are aware that, in order to obtain a rapid and energetic action, it is often necessary to skirt the boundaries of toxicity. A physician cannot possibly, however, have access to his formulary every time he is called upon to prescribe a dangerous medicament; the same hesitation arises at each prescription of a very active substance, unless he confines himself to the use of several drugs comprising his daily routine.

With the method which I propose, all dangerous medicaments must be so divided that, however toxic, the maximum dose to be given to an adult in 24 hours shall be exactly divided into 12 doses, and these doses shall be in the form of powders, pills, granules, capsules, pastilles, etc. For example, the maximum dose of chloroformic amorphous digitalin of the Codex being 1½ milligrammes, the 12 granules together will contain 1½ milligrammes. For crystallized digitalin of the Codex, of which the maximum dose in 24 hours is one milligramme, each granule should contain one-twelfth of one milligramme, in such manner that, if the physician wishes to prescribe the maximum dose to be divided amongst the 24 hours, he will prescribe 1 granule every 2 hours, or 2 granules every 4 hours, or 3 granules every 6 hours, etc. If it be desired at the outset to give the maximum dose, in certain urgent cases which the physician will alone be able

*Translated from Revue de Thérapeutique by Joseph Helfman.

to judge, according to the nature of the patient or of the malady, the 12 granules may be prescribed in a single dose.

There will thus be no inconvenience arising from the voluntary or involuntary substitution of one digitalin for another; the dosage of each being in proportion to its activity, and consisting of one-twelfth the maximum dose, which will always represent the same action.

The physician will no longer have to exert his memory to recall the maximum of such or such a medicament; he will only have to remember the figure 12—the *duodecimal*.

Why this division by 12, rather than by 10 or by 24? I choose it simply because it is the most conformable to actual medical habit and the easiest for the patient to follow without error, the physician directing usually that the patient takes such a dose of the medicament every two hours or every hour, allowing for the hours of repose at night. He may also prescribe, according to the nature of the malady, a larger dose every 4 hours, or every 6 hours, or he may go to the extent of ordering the entire dose of 12 to be taken once, twice, or three times daily. All these numbers are exact divisors of 12, and will not permit the taking of more than 12 doses during the 24 hours, making it necessary to warn the patient not to exceed 12 doses—which would uselessly inspire him with doubt or fear.

Division by 24 may seem equally rational, but it presents the inconvenience of necessitating the administration of too many pills, granules, or powders, when it is desired to give the maximum dose in a short time.

I have rejected division by 10, which presents the serious disadvantage and danger of permitting the patient to take more than the maximum dose in 24 hours. If he be told to take one granule every 2 hours, for example, he will exceed the maximum dose by two units; the same with 2 granules every 4 hours. Hence, it would be necessary to enjoin upon him not to take more than 10 doses in the 24 hours, which would entail an effort of memory and useless directions, since from a practical point of view it is quite as easy for the pharmacist with his pill machine to divide a pill-mass into 12 as into 10 equal parts.

Thus I have adopted the number 12, because 12 lends itself to all the combinations above cited. What could be more simple, if we desire to give the maximum dose in 24 hours, than to prescribe 1 granule every 2 hours? If we wish to give a half, a third, or a quarter of the maximum dose—if we have to deal with an infant or any other factor—we give one granule every 4 hours, every 6 hours, or every 8 hours.

The division by 12 possesses the advantage of permitting all manner of combinations without effort of calculation and without the possibility of a single lapse of memory.

Moreover, the confusion of an amorphous with a crystalline alkaloid, of a soft with a dry extract, of an aqueous with an alcoholic extract, will no longer prove the source of perplexity; nay, I would even assert that the confusion of one medicament with another—whether this confusion proceed from the error of physician, pharmacist, or patient—will be no more attended with danger, and cannot give rise to poisoning. Each dose, granule, pill, powder, etc., always containing one-twelfth of the maximum dose, whatever the medicament may be, the number 12—the number of hours in the day—ever remains the key to my method.

There is no need of expatiating longer on a method of medication so simple that we may well inquire why it has not been sooner employed. The reason, no doubt, lies in the fact that the ancient pharmacopœia presented little to physicians aside from medicines to be employed in relatively large doses, more or less reliable, while the discovery during the past few years of numerous very active substances, requiring administration in extremely small doses, demands a new method of posology.

To sum up, the medication which I term duodecimal consists in dividing the recognized maximum dose of medicaments into 12 equal parts—whether in powders, granules, pills, wafers, capsules, pastilles, or any other pharmaceutical form.

The foregoing simple exposition makes it evident that:

1. Accidental intoxications need no longer be feared. The most conscientious physician may have a slip of memory or commit a

lapsus calami. With the duodecimal method, error is impossible. It is simply necessary to recall the number 12, whatever may be the medicament.

2. The prescription of very active medicaments becomes efficacious without assuming any danger; from the outset the maximum dose may be prescribed, a half-dose, or a quarter-dose, in accordance with the desired effect and the age and temperament of the patient.

The maximum dose, and hence the division, being based on the experience of the best-known clinicians and physiologists, the physician who wishes to act rapidly and energetically may do so with security.

In conclusion, I would remind the reader that the proposed method is specially recommended only for very energetic medicaments which may involve speedy danger, and that it would in no wise trammel the art of formulating.

With respect to age, it may of service to transcribe here the table of Gaubius, adapting it to the duodecimal method:

Age.	Maximum Dose.	Duodecimal Doses.
Adult	Entire dose.	12
Up to 2 years	$\frac{1}{12}$	1
At 3 years	$\frac{1}{6}$	2
At 4 years	$\frac{1}{4}$	3
At 7 years	$\frac{1}{3}$	4
At 14 years	$\frac{1}{2}$	6
At 20 years	$\frac{2}{3}$	8
From 20 to 60 years	Entire dose.	12

Beyond this period of life the inverse gradation should be followed.

TREATMENT OF DISEASES OF THE RESPIRATORY ORGANS BY DIRECT APPLICATION TO THE PARTS AFFECTED.

H. M. DUNLAP, M. D.

The treatment of diseases of the respiratory organs has always been a subject of much interest to the medical profession, as well it may be when we consider the fact that about one in six or seven of all deaths in the United States is caused by pulmonary consumption alone, not counting those resulting from other diseases of respiratory organs. The same cannot be said of any other disease or class of diseases.

This great mortality must be due to one of two causes. Either less attention has been given to this branch by the profession, or this class of diseases is more difficult to prevent and cure.

If the first be true, we are wholly at fault. If the second, it behooves us to be doubly diligent that every possible means be employed to stay this tide of death.

It is not my design to go into the details of treatment, or even outline the treatment of the various diseases individually. My main object is to call attention to some points which have a general application.

I do not claim to have discovered a new remedy or method, but wish to emphasize the importance of thorough treatment in all cases, both mild and severe, and the fact that the same principles of treatment apply here as in diseases of other organs, especially those in which mucous membrane is involved.

The subject of tuberculosis has received much study in the past eight or ten years, and much light has been thrown upon this disease by the many eminent investigators who have given their attention to this subject.

With our increased knowledge it is but natural to suppose that there should be a corresponding improvement in methods of treatment, and results obtained thereby. There certainly have been numerous attempts made in this direction, but, unfortunately, these have, in nearly all cases, proved utter failures. Koch's treatment created an intense excitement throughout the entire world, only to die out as those before it had done.

This shows the vast importance of this line of work. And it is to be hoped that this much desired panacea will, sooner or later, be forthcoming.

While I would not, for a moment, cast reflections upon those who have failed in this attempt in the past, nor detract in the least from the laudability of the endeavor, yet I do think that we have sometimes allowed ourselves to be carried away by the glamor of some of these supposed great discoveries, and perhaps have failed to accomplish all the good we might in our own more limited sphere.

We do not all have the facilities, nor the

time, to carry on elaborate investigations and experiments, which might enable us to discover a cure for tuberculosis, and thus gain world-wide renown, but we may, every one of us, do something to prevent this dread disease, which is as noble a work as the other, even if it does not receive the applause of the world. In fact, I think there are few of us who, if we had our own choice between being *cured* of tuberculosis or *prevented* from having it, would not choose the latter.

The discovery of the bacillus tuberculosis, and with it the knowledge of the communicability of the disease, enables us to use means for preventing its transmission from one individual to another.

There is, however, quite a large proportion of cases in which there is no known, or even suspected, source of infection. They frequently develop after some acute affection of the lungs, which may not, in itself, have been of a serious nature. But a few bacilli or spores, accidentally coming in contact with tissues whose vitality has been lowered and resisting power diminished by previous disease, obtain a foothold and develop and multiply where they would have been immediately destroyed had the tissues been in a healthy condition.

It is a well known fact that healthy tissues possess the power to destroy micro-organisms, unless present in great numbers.

I do not remember to have ever seen a case of pulmonary or laryngeal tuberculosis in which the vitality of the tissues had not been impaired, either by previous local disease or marked derangement of the general health.

I have seen many cases in the past two years who give about the following history: Were perfectly healthy until they had the "influenza"; recovered, apparently, but a cough set in soon after, which has resisted all treatment; no heredity. Examination of chest shows consolidation with more or less breaking down of tissue. Examination of sputa shows tubercle bacilli abundant.

On the other hand, I have seen cases of "influenza" with pulmonary involvement and hereditary tendency make excellent recoveries with sound lungs, by giving these organs proper attention in connection with general treatment. I suppose everyone here has had a similar experience.

As I said in the beginning of my remarks, it is not my design to dwell upon any one particular disease. I have dwelt somewhat upon tuberculosis and its relation to other diseases in order, if possible, to fix in our minds the great importance of giving our best attention to all diseases of the respiratory organs, however slight they may seem to be. And in this I would include, not only affections of the lungs, but of the upper air passages as well.

While I do not concur in the popular notion that naso-pharyngeal catarrh leads to consumption, I do know that it is the most potent cause of serious diseases of the middle ear, and that frequently repeated "colds" without treatment lead to naso-pharyngeal catarrh. Hence, my remarks on treatment are intended to apply to the entire respiratory tract, including the frontal and sphenoidal sinuses and the middle ear.

When I began giving especial attention to diseases of the nose, throat, and lungs, I found that in acute affections the treatment consisted almost wholly of systematic medication. This was also true in chronic cases, except in diseases of nose and throat, where local applications were made, perhaps once daily, of such a nature that in ten minutes they would be absorbed and carried into the general circulation.

I am glad, however, to note many improvements in this branch of medicine, even since I began practicing. But it seems to me it has not quite kept pace with other branches, either in practice or literature.

We have books and journals in abundance on nearly every subject except the one under consideration. I do not know of a single journal devoted to this subject. Text-books are not abundant, and I have seen none of recent date, except on diseases of nose and throat.

It seems to me that a subject of so much importance is deserving of more attention from eminent medical men, who have the ability to transmit some of their knowledge to others.

We can, however, profit by the advancement made in other branches of medicine, and will do well to copy after their methods, to some extent.

We may even get a few useful hints from our gynæcological friends. In fact, no one branch of medicine can be independent of the others. When a man becomes a specialist, in the strict sense of the word, he is almost sure to become a crank, if he is not already one, who can see nothing outside of his own narrow, contracted sphere.

If, then, we look out over the field of medicine, we will find one general principle underlying all treatment. It is this: In order to obtain the desired effect of any remedy, it must come in contact with the tissues to be acted upon, and of course the means which most thoroughly accomplish this purpose will give the best results.

The general circulation is probably the most frequently employed channel through which this object is accomplished, and in many cases is the only one that can be employed. It has, however, the disadvantage that only a very small portion, in most cases, reaches the point to be affected, and at the same time every other part of the body must receive more or less of the agent used. It is like taking a full bath in order to wash the hands. If, therefore, we can make applications directly to the parts to be acted upon, we not only get the full effect of the remedy where it is wanted, but also avoid, to a great extent, its action on other parts. Why, then, should we take the round-about way of the circulation to treat purely local diseases of the respiratory tract, instead of the short cut, by direct application? Why dose our patients with cough mixtures until we ruin their digestion, when the very same agents can be applied just where needed, with far better results? Why not follow the example of a gynæcologist, who treats local diseases by local application?

What would we think of an ophthalmologist who would treat purulent ophthalmia by the internal administration of certain remedies which he found were eliminated by the lachrymal gland?

These are some of the queries which led me to make a series of experiments to determine the practicability of a more extensive employment of local treatment in respiratory affections, and the best means for its accomplishment. The result has produced a decided change in my methods of treatment, much to my own satisfaction and that of my patients also.

I find that it is possible to reach every portion of the respiratory tract, and that any desirable agent can be carried beyond the larynx without irritation. This is true of both volatile and non-volatile substances, so that there is practically no limit to the variety of remedies which may be employed.

After many experiments I have reached a conclusion that the nebulizer is the most practical apparatus for general use in this line of treatment, and is particularly well adapted for the patient's own use.

There are several styles of this instrument on the market, a number of which are good. But not finding any which fulfilled all the conditions which I deemed necessary, I have had one constructed after my own design, a brief description of which I will give later on.

With this instrument alone direct applications can be made to every part of the respiratory tract and middle ear, and, with very little instruction, can be used by the patient himself, if necessary. And not only is this true, but any article of the materia medica can be applied in this manner.

I have used a variety of methods and apparatus for making direct applications to the respiratory tract, but have found none so effectual and free from objectionable features as this.

We must ever bear in mind the fact that it is the continuous action of remedies that yields the desired results. We may learn a lesson in this direction from the use of the vaginal tampon, the suppository, and medicated bougie. Even in internal medication we do not give one enormous dose and expect that to have the desired effect; on the contrary, we give small doses and repeat frequently.

I think that it is here that many fail to obtain the desired results from local treatment. We *must* have the continuous action of the agent employed. This does not require the constant application of the treatment, but only its frequent repetition, if our solutions are properly constituted.

The character of the solution is of much importance. To this end I have so constructed my nebulizer that solutions having a balsamic base can be used with it.

The following formula is an example of such a solution:

BALSAM SOLUTION NO. 1.

℞ Oil Scotch pine, ♏ xx.
Oil eucalyptus, ʒ j.
Oil cinnamon, ♏ xx.
Menthol, crystals, grs. xx.
Ext. balm of Gilead buds, fl. ʒ j.
Tincture benzoin, ʒ iv.

This preparation is highly antiseptic and stimulates a healthy secretion, besides securing the salutary effects of the balsams themselves.

To the above may be added a great variety of other agents as different cases may require, such as cocaine, camphor, creasote, carbolic acid, quinine, all of the essential oils, and their products; in fact, any article of the materia medica which is soluble in alcohol.

A solution of this character, administered with a nebulizer, reaches the mucous membrane in the most minute particles, where, on account of the moisture always present, it is precipitated, forming a coating on the membrane which absorbs slowly, thus holding all the constituents and maintaining a constant action for an hour or two, whereas if administered in an aqueous solution, absorption takes place almost immediately, and the local effect is practically lost. Also, the protective action of such an application is not to be lost sight of. If the application is repeated several times daily, we will obtain the continuous action of all the constituents of our solution.

The importance of this point cannot be too strongly emphasized. The best results cannot be obtained unless this principle is carried out.

The liquid vaseline preparations, also, make a very good base, and can be used in both the nebulizer and atomizer. My experience leads me to prefer the balsam for use in the former, while for many cases of nasal trouble I like the oils applied with the atomizer, but they must also be frequently repeated.

In order to fulfill all of the above conditions it is necessary to have some portable and inexpensive apparatus, which can be used at the patient's home.

There are plenty of complicated and expensive office fixtures designed for this line of treatment, which are all very good in their place, but our patients cannot come to the office four or five times daily. And in acute cases, where the treatment is needed most frequently, they cannot, in many instances, come at all. Hence the usual custom of treating such cases, largely, by internal medication, with, perhaps, only an occasional local application.

This unsatisfactory condition of things, together with the highly gratifying results which I have been able to obtain by its use, is the only apology I have to make for calling your attention to the Globe Nebulizer, which I have designed to supply this much-felt need in my own practice. This it has done so effectually that I have felt it my duty to give others a chance to try it also.

The instrument consists of a strong, globe-shaped bottle (Fig. 1), to the top of which a hard rubber head is secured by means of a

FIG. 1.

metal collar which screws on neck of bottle. A rubber gasket between the top of bottle and the rubber head secures an air-tight connection. The spraying tube reaches from the under side of head to near the bottom of bottle, and works with a very small amount of solution. The spray is driven forcibly against the side of the bottle, which causes it to break up into extremely fine particles, which will float in the air for a long time and may be readily inhaled, without laryngeal irritation.

There are three tubes attached to the side of head; one, to which the bulb is attached, communicates with the spraying tube. The other two open into the bottle. To one of these side-tubes is connected the mask or nasal tube; the other serves as an inlet to

the inspired air, and when using the nasal tube may be closed with a rubber cork.

The spraying tube (Fig. 2) is hard rubber, and made in three parts, which are separable from each other, as shown, thus affording the greatest facility for cleansing and removing obstructions. It is this feature that makes possible the use of balsams.

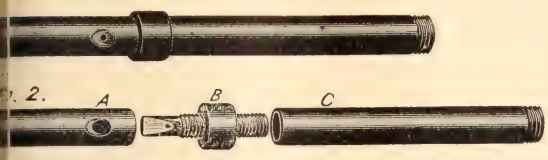

Fig. 2.

By using a nasal tube, instead of the mask, the application can be confined to the nasal passages alone, or the medicated air may be forced into the middle ears and frontal and sphenoidal sinuses.

Thus the work of two or three instruments is accomplished by this one alone, and in the most effectual and convenient manner possible.

I wish also to call attention to an instrument manufactured by W. H. Armstrong & Co., of Indianapolis. It is called the "Success Nasal Syringe," and is very effectual indeed in washing out the nasal cavities preparatory to other applications. It consists of a single neck syringe bulb, to which is attached a soft rubber tube, like a catheter, with a number of small perforations instead of the usual eye. The cleansing solution is drawn up into the bulb, the tube is then inserted in the nasal cavity to any desired extent, and the solution is forced out in a large number of very small streams. It is simple, and there is no possibility of doing harm with it.

I will now speak, very briefly, of some of the formulæ which I have found especially beneficial in various conditions.

I will first refer to the formula already given, since I use it as a base for most of the other solutions which I shall mention.

The oils of cinnamon and eucalyptus, also the menthol, have very decided antiseptic properties. They also relieve to a marked degree the congestion and swelling of the turbinated bodies, this being due, I think, to a direct stimulation of the muscular coats of the arterioles.

When we add to these tr. benzoin, which causes their very slow absorption, we get their maximum effect.

For the sake of convenience I have designated this solution No. 1.

The following is of much value in the treatment of all of the acute catarrhal affections of the respiratory organs:

℞ Gum camphor, gr. xx.
Cocaine muriate, gr. xx.
Solution No. 1 (as above), ℥ ij.
M. Sig.—Use with nebulizer every one or two hours.

In the first stages of acute rhinitis, pharyngitis, laryngitis, and bronchitis, this has given better results than any other treatment I have ever used. We have the action of the cocaine and camphor on the turgescent turbinated bodies and mucous membrane generally, added to that of solution No. 1. We also get the sedative action of the cocaine, which is very much prolonged, and the reaction which usually follows its use in aqueous solution is almost entirely obviated.

In the treatment of acute rhinitis especially, with the above combination, the results are often surprising. I have seldom failed to abort an attack with this treatment alone, if commenced early. The congestion of the frontal sinuses, with severe headache, present in many cases of influenza, has also been greatly relieved.

It may be thought by some that a "cold in the head" is a subject worthy of but little attention. I, however, consider it a matter of importance, not only on account of the immediate relief which we can give our patients, for which they are usually grateful, to say the least, but also on account of the remote results. I consider that the large majority of cases of chronic catarrh, with its consequences, have their origin in these acute attacks, left untreated, and that the latter disease is largely preventible.

I fail to see how it is any less our duty to do what we can to prevent such a disease, which renders many persons miserable for a lifetime, than it is to prevent the spread of such diseases as scarlet fever and measles, which are usually recovered from in a few days.

In the later stages of acute catarrhal affections, and in chronic cases also, where

the secretion is not abundant, I have used the solution No. 1 alone.

When the secretion is excessive it is well to add balsam of Peru or alcoholic extract of hemlock bark.

Here is a formula which I use in cases of tuberculosis:

℞ Pure creasote (beech), ♏ xl.
Solution No. 1, ℥ ij.

M. Sig.—Use with nebulizer four or five times daily.

While, of course, I would not think of confining the treatment of this disease to local applications alone, yet I think they are of much value in all cases.

I am a believer in the germ theory of the causation of tuberculosis, and that anything we may do to retard the development and multiplication of the bacilli will be of value in the treatment of this disease.

I consider the inhalation of creasote in this form, together with its internal administration, as being the most rational method of treatment, and I would call attention to the fact that creasote can be much more rapidly introduced into the system when given per rectum than in any other way, drachm doses being tolerated in very many cases.

I have employed the following formula:

℞ Creasote (beech), ℥ i.
Cod-liver oil, ℥ vi.
Yolk of one egg.
Water, q. s., ℥ viii.

M.

The dose of this mixture at first should not exceed two ounces, and may be gradually increased until the entire quantity is given given at a single dose. It is best given at night, after emptying the bowels by an enema.

By combining these two methods of administering creasote, the general system and lung tissue may be impregnated with the remedy to the greatest possible degree. And in the early stages of the disease, the bacilli, if not destroyed, may have their vitality so impaired that the tissues, under forced nutrition, are able to resist their action and recovery take place.

I think this method of treatment is worthy of a more extensive trial than it has yet had. This duty devolves upon the general practitioner, as it is the family physician who first sees these cases.

In cases of spasmodic asthma, whooping-cough, and similar affections, I find the following gives very prompt relief:

℞ Tr. stramonium, ℥ i.
Tr. ipecac, } aä ℥ ij.
Tr. lobelia, }
Tr. opium camph., q. s., ℥ iij.

M. Sig. Use with nebulizer until the attack is relieved.

I will call your attention to one other formula, the use of which has given me much satisfaction in the treatment of hay fever and "colds" of a similar character, occurring in certain individuals both in summer and winter. I have been able to relieve attacks in patients who have been afflicted for many years, the attacks always lasting until cool weather. It is as follows:

℞ Cocaine muriate, gr. x.
Quinia sulphate, gr. xx.
Gum camphor, gr. xx.
Acid hydrochloric, gtt. x.
Solution No. 1, ℥ ij.

Dissolve the quinia sulphate in the acid, then add the other ingredients.

Sig.—Use with nebulizer 5 or 6 times daily.

Many other valuable combinations may be made to suit individual cases.

I have purposely omitted to mention many of the methods and apparatus employed in treating the class of diseases under consideration, as all are more or less familiar with them, and the mere mention of them would consume time which can be used to better advantage.

My object has been to emphasize a few practical points, which may readily be applied by the busy practitioner, who has but little time to give to special treatments, and which, if employed early, would prevent many chronic and fatal cases.

The methods of treatment and formulæ given are all based upon an extensive practical experience, and have been thoroughly tested.

I could report scores of cases which would demonstrate all that I have claimed, but will not take up your time to do so.

Battle Creek, Mich.

THE SURGICAL TREATMENT OF APPENDICITIS.

BY DR. E. P. HURD.

Every general practitioner has had more than one experience like the following:

He is called to attend a young or middle-aged man (the disease is especially frequent between the ages of 15 and 30 years) who has been for some hours suffering from severe pain in the bowels. On inquiry, the pain is found to be of the nature of colic, and to be most severe deep down in the right side. It is thought to be colic from indigestion or fæcal impaction, and a purgative is administered. Some relief is obtained from the action of the purgative or from an enema, but this is only temporary, and an opiate is soon required. Pressure over the right iliac fossa is painful; the muscles on that side are contracted and rigid; and deep down in the cæcal region a tumefaction is felt, which may be small, rolling under the exploring finger somewhat like the knuckle of the thumb, or it may constitute quite a sausage-like swelling. The pulse is good, and there may be but little fever, but there is anorexia, nausea, and vomiting. The pain soon becomes so intense as to demand the frequent exhibition of opiates—one-half grain of opium, one-fourth grain of morphia every hour or two.

The physician has now data enough to warrant the diagnosis of perforative appendicitis. He may as well put to one side all notion of stercoral typhlitis; surgeons of to-day are believing less and less in the existence of typhlitis apart from appendicitis. It cannot be said that stercoral typhlitis has ever been found at the autopsy, and where perityphlitic swellings have been examined during life or after death, they have with singular invariability been found associated with perforative appendicitis.*

In the case which we are now supposing, the probabilities are at least ten to one that a perforation of the appendix has already taken place. The swelling that is felt deep in the right side is either the swollen, sloughing appendix or an inflammatory exudation—pus and fibrine—imperfectly walled off from the general peritoneal cavity, originating in an escape of irritating matters and microbes from the appendix.

"The diagnosis of appendicitis," says Charles Talamon,* "does not generally present any difficulty. The ordinary clinical type is as easy to recognize as that of acute pneumonia. The suddenness of the onset, the pain in the iliac region, the localized tumefaction in that region, are as characteristic as the violent initial chill, the pain in the side, and the rusty expectoration of acute pneumonia."

The physician who has watched thus far the evolution of the disease must be prepared to see much more alarming symptoms if he contents himself with giving opiates, with now and then a saline cathartic and turpentine enema, and applying hot stupes to the abdomen. The fever mounts up to 102° or 103° F., with occasional remissions; the vomiting persists, and nearly everything is rejected; the pain becomes more intense and extends over the whole abdomen; a general tympanitic distension of the abdomen supervenes. The pulse becomes small and rapid, and a fatal syncope may at any time set in. In fact, the clinical tableau is that of acute general peritonitis.

Is there any way of preventing the fatal issue? If medical means are so often unavailing, are surgical means more efficacious?

The advanced surgeons of to-day, the men who are thoroughly conversant with the principles of modern asepsis and antisepsis, and who take the most scrupulous pains to make every operation aseptically thorough—who dare any operation which gives any promise of saving life—answer "Yes!" The moment you have made up your mind that you have a case of appendicitis before you, that moment is the time to operate. Don't wait till the symptoms of general peritonitis set in, for then it will assuredly be too late. Operations are the most successful that are performed within twenty-four hours of the onset of the attack. It must be borne in mind (these surgeons say) that you have, practically, a deep abscess to contend with;

*See reports of surgical societies, New York, Boston, Philadelphia, and foreign during the past four years; see the summings up of the subject in the last three issues of Sajous' Annual.

* La Médecine moderne, January 14, 1892.

that nature is laboring, though under serious disadvantages, to wall it in; and that an early operation, before the pus has become diffused over the abdominal cavity and has excited general peritonitis, may enable the surgeon to drain off the septic material and save the patient.

The operation is not a difficult one, and, if done antiseptically, is not a dangerous one. A lateral incision, three inches long, is made over the swelling in the iliac fossa. With a little careful dissection the peritoneum is reached; with hot water, the bleeding is controlled, or at the worst, a few small vessels require tying. The peritoneum over the cæcum will in all probability be found livid and bulging, and, on being punctured, will give issue to pus. The incision may then be enlarged on a director till the swollen cæcum is freely exposed; the surgeon will be fortunate if he now finds himself in a circumscribed pus cavity. In this event, he may regard his duty done when he shall have put in a tent of iodoform gauze, and closed up the wound, after having first well washed out the pus cavity with hydrogen-peroxide solution. Most surgeons, however, prefer to go farther; they are not satisfied till they have found the offending appendix, ligated it, and removed it. The finding and removal of the appendix is not generally a difficult matter, especially, as the surgeon has the longitudinal bands on the cæcum for his guide. It is generally enlarged, inflamed, and gangrenous, and its removal will expedite the chances of recovery, besides ensuring the patient against any future attack.

It is quite possible that the surgeon may find pus diffused in the abdominal cavity, and general peritonitis commencing and advancing. The duty then is sufficiently plain; the abdominal cavity must be flushed out with hot water, to which a little peroxide of hydrogen may be added. Gallons, if need be, should be run through the abdominal cavity till the intestines and the peritoneum are perfectly clean, and all pus-pockets are cleared out. When the hot peroxide solution comes back clear and no longer frothy, the irrigation may be stopped, the wounds packed with a drainage tube and iodoform gauze, and the operation is completed. Few, if any, stitches are put in, as better results are obtained by leaving the wound open for free drainage.

Many conservative physicians will start with horror when these early laparotomies are urged upon them as almost a duty, for they have been accustomed to look upon a surgical operation, in such cases, as a last resort, not to be thought of till all medical means have failed. It is evident, however, to any one who is familiar with the medical literature of the past few years, that medical opinion is coming more and more to favor an early laparotomy for these perityphlitic swellings, especially since the published records of these early operations are showing such a large percentage of recoveries in cases which, if left to themselves, must have proved fatal. Moreover, physicians in active practice are continually seeing patients die from this disease where medical means had completely failed, and where an operation, if performed at all, had been performed too late.

The cases of McBurney, Worcester, Stimson, Abbé, Weir, and others, published within the last year, make a distinct advance in the treatment of appendicitis. They have demonstrated the fact that the mortality of cases operated on in the first three days is not high, that in the very early operations the appendix can be often excised before it ruptures, or pus forms outside. In such cases, the operation can be completed as a real antiseptic laparotomy. In contrast with such clean, early operations, the later operations must deal with patients already more or less septic, with burrowing pus cavities and gangrenous sloughs. The later operations must consequently have a much higher mortality."*

SEXUAL FRIGIDITY IN WOMAN.†

BY DR. GRELLETY.‡

With advancing years, one becomes the confidential repository of many physical and moral miseries. The facility with which certain avowals are made would be occasion for surprise, if we were not often called upon to

* Dr. J. W. Elliot, in Boston Medical and Surgical Journal, May 21, 1891.

† Translated from L'Union médicale du Canada.

‡ In Concours médical.

fulfil simultaneously the functions of physical and spiritual adviser.

Women, in particular, who have acquired with or without reason the reputation of being very communicative and unable to withhold anything, but their age, readily acquire the habit of divulging their deepest secrets and of exposing the darkest recesses of their hearts. They pose before the public, and constrain themselves to affect a certain ideal of delicate grace and sentimental chastity; but in order to repose, to be at their ease, like a warrior laying aside his armor, they love to gossip familiarly and to have an impassible confidant to whom they may reveal without misgiving or embarrassment their deformities, their aspirations, their disenchantments, their infirmities, and even their stupidities.

By vocation the medical man is particularly well situated to hear and see that which should not be seen or heard. This is a privilege not always to be coveted and generally requires the exercise of much tact and patience; however, it enables one to do a little good and to remedy the mischief wrought by many human frailties, without being besmirched thereby.

I shall, therefore, not astonish any of my readers, who must naturally be more or less informed on the subject, in stating that there are passionate women who yield themselves up with transport, who would brave all to give and procure the supreme ecstacy of pleasure; but, again, there are not a few others—insolvent debtors, impalpable succubi—who, in place of dreamy expansion, persist in a repelling frigidness. They are not to be illuminated; they rest inanimate and nonchalant. Their dubious sensibility seems congealed; their tenderness is furtive, unsubstantial. They are thus obliged to remain passive, or, rather, to simulate and play comedy after the manner of one of our greatest tragediennes who—if we may trust her indiscreet confidences—has always conserved her coolness of temper and her placidity, despite the innumerable guests who have traversed her hospitable boudoir.

I attended last summer a lady who, like a tree in which the sap is prematurely dried, ceased to menstruate at twenty-eight, and who has never fulfilled her conjugal duties save with a certain melancholy resignation, like an enforced task admitting of no alluring recompense, no complete satisfaction.

A second, another subject equally incombustible—and what a splendid subject!—became incandescent for the first time three years after marriage, to be transformed anew into an economic log, without heat, ten years later, toward her thirty-fifth year, at the very season of plenitude in the sensations of other women, who would then multiply and renew without cessation and diffuse about them, like never-failing springs, bliss everlasting. She had no child, although well-formed, and it may be asked if this incapacity for emotion did not prevent her conceiving. But, it will be objected, like an excise-match, she was illuminated at last. To be sure, but, as we are not initiated into all the mysteries of the alcoves, I suppose that, like the matches used for comparison, my client must have given forth more smoke than fire!

A third, docile and compliant by nature, desirous of bowing down and adoring, is 26 years old, and was married at 20. Thus far she has hoped in vain for a child, is inconsolable, and is accordingly prompted to tell simply and without reserve that her relations with her husband, whom she dearly loves, however, have brought her more wormwood than honey. She undergoes them only with a vague lassitude and a certain sensation of sacrifice.

She is timid and gentle, very upright by nature, and ardently desires to become a mother. She would, therefore, ask nothing better than to be borne away, but she cannot learn to yield herself up—to experience the bounding impulse with which one human soul seeks to merge and melt into another. She feels humiliated by this impassiveness, and would gladly dispel the discontent of her lord and master, who complains of clasping only a shadow in his arms and deplores his solitude in bliss. Perhaps it is he who lacks power to animate this Galatea!

It is useless to multiply examples. The fact is too well known, and the only occasion for speaking of it is the desire to find a remedy for this unnatural infirmity. At a time of universal complaint that the reduction of natality in France constantly continues, it is opportune to interest ourselves

in those spouses who ardently wish to give citizens to their country. Their number is legion, and in diminishing it we shall dispel many sorrows and likewise perform an act of patriotism.

This is obviously the business of the gynæcologists, and I do not wish to usurp their prerogatives, but in such a matter every physician may be called upon for counsel, be it only to cast aside the chalice drained by those households who have espoused misfortune, or to prevent sterile women from giving full play to their distress and invoking too late the medical intervention which might save them. Indeed, I am convinced that the beginnings of marriage are often fraught with consequences disastrous to many young women, and that a remedy would be possible if early employed.

The same tale is ever told, with all its variations: A young girl, brought up in a dream of future tenderness and in the expectation of a perturbing mystery, gracefully impure but very exalting, must be overwhelmed when the exigences of marriage are revealed to her by a boor.

Now, who can compute the number of boors in the world—male brutes, satyrs in delirium, beside themselves from the abstinence of betrothal? They rush upon their prey just as a famished dog seizes a bone which has been thrown him to gnaw, and the victim, often frail and prematurely married —needing gradual initiation and longing for slow habituation—wishing to build the nest of happiness straw by straw—expiates by frightful traumatisms and life-long sufferings these fierce paroxysms and this frantic violence.

How can she fail to be broken by this sad awakening? What a disenchantment!

Do you, then, wonder if the horror of such an assault, of this sudden battle without premonitory skirmish, renders her frigid, and if she rests, pale with disgust, under the triumphal outrage of robust muscles? We can think only with pity of the pathological herd which man, the inexorable herdsman, drives before him. This somber and quivering cohort stains the soil with a long trail of its blood. Amongst the rich, muffled in silks and velvets, the eyes may smile; but, behind this mask, lowers grief, poignant and mute, concealed like a hideous sore under a bandage wrought in gold.

As for the wives of the poor, those who do not lie, daughters of the field, who expiate in special hospitals their credulity of a day —who do not disguise their sufferings with gauze lace, their drawn and sallow features are palpable evidence of the same cross burned into the living flesh—of the same wound inflicted by man—whom yet they do not curse.

I have dwelt upon only one of the aspects of sterility; many other elements enter into account, and I shall not treat of them today, only stating that the vaginismus, the vulvitis, and metritis of early marriage are not without a share in the discomfiture of certain husbands, justly punished by those upon whom they have transgressed.

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As a corollary to the foregoing, I may be permitted with many of my predecessors to dwell in silent wonder upon the astounding mysteries of generation and the myriads of germs necessary for accomplishing reproduction. What useless sacrifices, what lavish extravagance, ere the end of future gestation is attained!

And yet of all this serpentine host of infinitesimal beings one elect suffices—one single atom, an imperceptible nothing, not measuring five-hundredths of a millimeter—to thrill the maternal sanctuary as it feels itself violated. What responsibility rests upon this spermatozoid! "It bears within itself," wrote Maurice de Fleury recently, "the ananke, the fatum, it is the original sin, it embodies atavism and heredity, all that is irremediable, all that derides and denies our freedom of will, the malediction of a race, the impossibility of being good.

"By virtue of this molecule, child, thou wilt assassinate, because thy father was a drunkard; thou, daughter, wilt have a black sign under the left breast, because thy ancestress had it; little ones, ye will grow lean in phthisis, and will spit out your lungs, because of your grandfather's nuptials; and thou, young man, will write beautiful and sad books, because thy granduncle was an adventurer; or thou wilt be thrice infamous, in memory of a certain ancestor, after ten generations!

"Yes, this globule fecundated will be in thirty years the finished machine, formidable in complexity—a whole of inexhaustible marvels. * * * It too will have its loves, its dreams, its shames, its logic!

"This germ in its turn will produce germs and will multiply. Then, when it shall have done throughout life, in bitterness and sorrow, its fatal work, it must return to its sources, to mingle with all else, to gush forth untiringly in some manifestation of life!"

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Certainly a beautiful page is this, consecrated to the indifferent and sovereign cellule—the cellule in which the world lies latent, big with the future and filled with human hopes.

I should fear to despoil it by comment, and I leave my readers under the spell of the startling revery which it must have provoked in their minds.

TREATMENT OF CERTAIN PERMANENT CARDIAC PAINS BY THE TINCTURE OF PISCIDIA ERYTHRINA.

BY DR. CH. LIÉGEOIS.

We have here a vigorous mountaineer, 40 years old, arthritic by temperament, if not by descent. On September 4, 1890, he complained to me of painful sensations, of a continuous character, which he had experienced for several weeks in the cardiac region—as though his heart were being incessantly twisted, pinched, pulled. The tachycardia is persistent; there is diastolic reverberation at the aorta; the pulse is hard, tense, corded; walking up an incline provokes dyspnœa. Moderate pressure with the end of the index finger applied to the fifth and sixth intercostal spaces in the region of the sternum increased the pain. This man is progressing towards arterio-sclerous myocarditis—chronic myocarditis resulting from coronary endarteritis.

This other patient is a husbandman, 39 years old; cigarette-smoker and drinker; suffering from arthritis (his mother and brother are asthmatic; his father has had a retinal hæmorrhage of the right eye); he has again and again during the past two years called my attention to his "rheumatism of the heart;" he has had two nocturnal paroxysms of pectoral angina. Walking and labor in the fields soon produce shortness of breath; here and there he has palpitations, with or without arythmia. Inquiry discloses that his "rheumatism of the heart" consists at times in a substernal bar; at times it assumes the form of a cramp, of an iron hand, of a claw, which grasps his breath and impedes respiration for one, two, or three days; at times the pains are habitual, and seem to traverse the heart from the back forward. With this subject, auscultation of the heart, which is somewhat hypertrophied, reveals a galloping noise, and subsequently, at the third right intercostal space, a metallic reverberation—all symptoms of arterio-sclerous myocarditis. Hard and tense, the pulse gives evidence of a super-elevation of arterial tension. Pressure of the fourth, fifth, and sixth intercostal spaces in the vicinity of the sternum gives rise to a pain which extends over almost the entire præcordial region.

This is a woman of 52 years, whom I have treated during the whole year of 1890 for a cardiopathia of the menopause; she had palpitations with arythmia, particularly in making any special effort or in experiencing emotion. The præcordial shock was energetic; the second sound reverberated to the third right intercostal space; the pulse was tense. What prompted this woman to apply to me was a constant pain in the region of the heart—an acute pain which traversed this organ from the back to the front, whence it extended as far as the epigastrium. The skin of the præcordial region, which we explored for the purpose of producing by pressure a pain in the fourth, fifth, and sixth intercostal spaces, was hyperalgesic.

The painful *continued* cardiac sensations of these three patients are frequently encountered, not only in the conditions cited in the foregoing, but with victims of gout, with the aged, with tobacco-users, and with many others afflicted with arterio-sclerosis of the heart. How are they to be treated? By repeated revulsion—every five days for a month, by Milan leaches; by vesicatories; by tincture of iodine or fire points, alternately applied above, upon, and beneath the

left breast; by permanent revulsion—a seton, a cautery of Vienna paste, at the third, fourth, and fifth left intercostal spaces, where suppuration is maintained with the aid of a weight kept in place by a layer of diachylon. I have but a limited confidence, never having obtained notable results, in the alkaline bromides; in large, sedative-reflex doses of four to five drachms they relax the heart, which may be of advantage, though it enfeebles its contraction and thus precipitates asystolia, which is precisely the thing to be retarded; in large doses, on the other hand, it elevates the blood pressure, which, to say the least, is useless in a malady characterized by arterial hypertension. The alcoholic tincture of fresh aconite root is too dangerous a weapon for prolonged use. Belladonna, henbane, contra-indicated by their excitatory effect upon arterial tension, never appeared to us efficacious. What of antipyrin, warmly recommended by some, rejected by others? In truth it does not always merit this excess of indignity; even in doses pronouncedly analgesic—three to four drachms *per diem* given by the mouth, and in doses of 50 centigrammes to 2 grammes given in subcutaneous injections—I concede that it rarely occasions accidents. Had these been produced, but a few occasions would have been sufficient to cause its repudiation; it has been seen—especially when the arterio-sclerous myocarditis, which is frequent, coincides with an interstitial nephritis—to provoke oppression, with cold of the extremities, and anuria; it has also been observed, however slight the cardiac degeneration, to provoke lypothymia, syncope, and collapse.

The *tincture of piscidia erythrina*, which I selected in the three preceding cases, proved quite as analgesic as antipyrin; it afforded rapid and durable relief. There were no disadvantages attached to daily doses of 20 drops, given at one time in the morning and 20 drops in the afternoon. It is permissible to proceed as far as 80 drops *per diem*, and to continue the treatment for a month without interruption. As a result of the very first doses the permanent spontaneous pain was mitigated; it seemed to disappear completely after five, six, and eight days, and after this lapse of time pressure of the fourth, fifth, and sixth left intercostal spaces was unattended with pain. A few drops of piscidia are taken for several days every time that the cardiac pains recur.

August 29, 1891, my friend, Dr. Soyer (of Vicherey), sent me one of his patients and kindly expressed the hope that I might be able to "lighten up the diagnosis and furnish useful suggestions for treatment." The patient was arthritic (our *confrère* had several times observed crystals of uric acid). Professionally he was an over-driven man, morally as well as physically. Twenty years before he had an attack of confluent smallpox; in his youth he had contracted a "specific malady." For the third time in ten years he was suffering from "very peculiar pains in the left thoracic region, during which there was hypochondria." These pains were of two kinds: some transient, others permanent, continued. The transient pains possessed the characteristics of organic pectoral angina. "The least effort," said the patient, "the movements which I am obliged to make in dressing or undressing, give rise to pains which, proceeding from the region of the heart, radiate toward the left shoulder, then to the back, and finally along the arms, especially the left arm; during that time I suffocate, I feel that I am dying; at times the pain rises to the neck and reaches the left lower jaw." The foregoing corresponds completely with the symptom-tableau of Rougnon-Heberden—a tableau due to an endaortitis which was accompanied with an ectasia of the aorta (diameter of the pre-aortic dullness, 6½ c. m.)—an ectasia with insufficiency of the sigmoid valvules, whence proceeds during the second period a shrill whistle, having its maximum at the third right intercostal space; the right-sub-clavicle was elevated, but the two radial pulses were isochronous, equal, without apparent retardation of the heart-beats.

Besides the endaortitis, the predisposing cause of the transient pains of pectoral angina, there was peri-aortitis, which affords the only means of explaining the continuous pains, of which we propose to treat. These occurred at the level of the pre-aortic region, to the right and to the left of the sternum, toward the second or third intercostal space, assuming the form of an habitual sensation of embarrassment, of

fulness, of distension—a feeling as of a burning bar of iron—or it may be a dull pain which impedes respiration or the movements of the arms; then at other times there was a gimlet-like pain between the shoulders, more rarely a pain half girdling the epigastrium; finally, the painful points were distributed along the anterior thoracic wall near the sternum. Cold, the action involved in chewing meat somewhat hard, movements, exasperated these permanent spontaneous pains. The latter resulted from a neuritis of the cardiac plexus and from phrenic neuritis; from a neuritis of the cardiac plexus, for pressure of the second and third left intercostal space immediately outside of the free border of the sternum, as also pressure within the left sterno-mastoidian in the region of the pneumogastric, was painful; a phrenic neutritis principally of the left side, for pressure was also painful when applied to the phrenic nerve at the level of the scaleni, to the internal part of several intercostal spaces, to the base of the thorax, and to the appendages of the diaphragm.

M. Bucquoy has procured great relief by constant applications of ice to the præcordial region; others resort to scarified cups; some recommended repeated revulsion of the pre-aortic region by vesicatories, by tincture of iodine, by very superficial fire points; others, revulsion by seton or the cautery, with Vienna paste applied at the second or third intercostal space and maintained for months. A brother practitioner suffering from arterial aortic insufficiency, whom I had the honor of advising, even had himself cauterized by phenic acid between the shoulders where the pain was ordinarily so tenacious. Cutaneous faradization of the præcordial region involves danger of arresting the heart, and avails naught against the pain, whilst it arouses the angina. Chloride of methyl would doubtless have been ill tolerated by our subject, since the cold augments his pain. He was, as Huchard says, a red aortic; the preparations of opium and of morphine would have aggravated his customary congested state, evident by a purple coloration of the countenance. We could only resort to chloral, which in the end enfeebles the contractions of the heart. Subcutaneous injections of cocaine hydrochlorate would expose the patient to serious accidents. The hydrobromate of cicutine corrects the dyspnœa but not the pain. We have sufficiently shown that the bromide of postassium is, if not injurious, at least useless in such a case. M. Soyer was wont to prescribe antipyrin—4 to 8 grammes per diem. Despite the large quantities ingested, it was well borne, very probably because the renal function of our patient proceeded admirably. But he began to grow accustomed to the antipyrin, which was no longer followed by the same relief. Not venturing to propose phenacetin or acetanilid, or even exalgin, I again prescribed the tincture of *piscidia erythrina* in the average dose of 20 drops, morning and evening, increasing the dose when pain required it. The patient was obliged to take as high as 70 and 80 drops per diem. November 3d he wrote me that the piscidia had produced "the best effect," that he had "for a moment believed himself cured." The pain had returned toward the end of treatment, "probably," he says in his letter, "because the medicament has lost its value, because the liquid has become discolored and has assumed a clear rose tint." I sent the patient a prescription in which the sedative action of the piscidia was increased by that of aconite and *veratrum viride:*

Tincture of piscidia erythrina, 60 grammes.
Tincture of veratrum viride, } ää 15 grammes.
Alcoholic tinct. aconite root, }
Thirty drops, morning and evening.

January 7, 1892, my friend Soyer informed me that the very violent peri-aortic spasms were allayed.

This proves that the tincture of piscidia is a good analgesic against sub-continuous cardiac pains, in vascular cardiopathia. It is more analgesic than hypnotic; it produces no gastric troubles; it loosens rather than constipates the bowels, and if it does not excite diuresis, at least it does not close the kidney. Moreover, if we may depend on the experiments of Ott (of Philadelphia), its active principle, the piscidin, relaxes the heart and reduces arterial pressure, which is not to be weighed lightly in affections where the tachycardia is not rare, or in which arterial hypertension is the rule. The principal thing is to procure the *genuine tincture of* (*five to one*) *of the bark of root of this legumin-*

aceous plant, obtained from Jamaica. As this tincture does not keep well, it should be prepared only in small quantities.

In conclusion, I would say that the tincture of piscidia has given me equally excellent results with neurasthenic, hysterical, and chlorotic subjects, with the victims of crushing misfortune, who, independently of all muscular, valvular, or arterial lesion of the heart, experience a *constant* feeling of laceration, of constriction in this organ; who present a hyperalgesic condition in the præcordial region, and on pressure give evidence of severe pain in the cardiac plexus at the second and third left and right intercostal spaces and inside of the sterno-mastoids.

THE TREATMENT OF PULMONARY TUBERCULOSIS BY CREASOTE.

BY GEO. H. PENROSE.

I have had occasion to study the action of creasote in more than 200 cases of advanced phthisis, in my capacity as physician in the U. S. Soldiers' Home, and am very heartily in favor of this remedy. Creasote was used only in cases presenting all the clinical symptoms of the disease and the indisputable existence of tubercular bacilli. Among them were patients who literally could not stand, and were of necessity removed to the hospital in an ambulance. In the above hospital creasote was given in the form of an emulsion with cod-liver oil, every drachm of the emulsion containing two drops of the medicament. At first a teaspoonful is given thrice daily; at the end of a week, the dose is increased to a teaspoonful every 3 hours. When nausea ensues, the patient lies down for about half an hour, which is sufficient to overcome this unpleasant collateral effect. As the patient improves, the daily dose of creasote is increased by degrees, administering as large doses as 48 to 60 drops of creasote *pro die.*

The success of the treatment was fairly surprising in all cases. It is needless to enter here in detail upon the various features of the improvement, which was observed in every case. As for collateral effects, virtually none were observed. *Everything depends upon the purity of the preparation.*

The Medical Age.

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B. W. PALMER, A. M., M. D., Editor.

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Editorial.

WHO SHALL DECIDE WHEN BACTERIOLOGISTS DISAGREE?

In the Cavendish Lecture on "Some Points in the Ætiology of Typhoid Fever," delivered by Sir Charles A Cameron, F. R. C. S. I., D.Ph. Camb., extracts from which are published in the British Medical Journal, June 11th, it would appear that bacteriological evidence of the ætiology of typhoid is at variance. Whether Eberth's bacillus and the bacillus coli together are the cause, or one of them separately, is the question.

The most recent work on the subject has followed along two lines. On the one hand, its tendency has been to show that Eberth's bacillus is not so commonly met with in the stools of typhoid patients or in water contaminated therewith as has hitherto been supposed.

A number of observers—Rodel, Roux, Vallet, and others—have examined the stools in different stages of the disease in a number of cases, and have found only the bacillus coli, without Eberth's bacillus. In fact, it would appear that Eberth's bacillus is not infrequently absent from the stools of typhoid patients. When present at all, it has usually been between the tenth and the twentieth day of the disease; at a time, namely, when Peyer's patches have commenced to ulcerate, and when sufficient time has elapsed to allow the bacillus coli to undergo the same modifications within these patches as on the view above noted it is assumed to undergo in the spleen in being modified into Eberth's bacillus. On the other hand, it has become more and more probable that the bacillus coli communis is capable, under certain circumstances, of ac-

quiring definite pathogenic properties in man. Its presence has how been demonstrated in a large number of suppurative lesions—abscesses, pleurisies, peritonitis, and the like, as well as in dysenteric conditions, cholera nostras, etc.

The question as to the specific or non-specific nature of typhoid infection has thus in the hands of bacteriologists resolved itself into a question as to the identity or non-identity of two organisms possessing slight differences of character, one of them (bacillus coli communis) constantly present in fæces, the other (Eberth's bacillus) only found, and then not always, in cases of typhoid fever.

Up to the present it cannot be said that the bacteriological evidence either way is conclusive. It suffices to say that the results recorded by Vallet appear to show that the two bacilli brought into antagonism with each other as rival claimants for the honor of being regarded as the chief pathogenic agents in typhoid fever differ very little in their morphological or other characters, and are indeed very variable in these respects. Their pathogenic properties, when tested on animals, are identical. The bacillus coli is to be found in a thriving condition in cesspools, and thrives well when grown in the fluids of such cesspools previously rendered sterile by filtration; while Eberth's bacillus does not grow under such circumstances, and soon dies. The bacillus coli withdrawn from closets is more virulent than that isolated from healthy human intestine, and much more virulent than Eberth's bacillus. In passing through the animal organism it appears to undergo certain modifications by which it approaches more and more in its characters to the bacillus of Eberth.

Lastly, on consideration both of the clinical and the experimental facts, it would almost appear as if the bacillus coli shared with Eberth's bacillus the power of producing typhoid fever. Always present in the intestine, it can become typhogenic under certain circumstances, and its sojourn in cesspools and closets appears to be one of the conditions that determine this change in its character. It is only within the human organism that it is capable of assuming the characters of Eberth's bacillus.

A FOUR-YEAR COURSE OF MEDICAL STUDY.

The Harvard Medical School has set a good example to all other medical schools. Not content with having elevated the standard of instruction all around (a change introduced several years ago), it has made obligatory on all its students a four-years course of medical study. In taking this step, it is but following the lead of the leading medical schools in the old world.

The fact must now be recognized that two years is too short a time for any man to master the various branches of medical study, and few can do justice to this study in even three years. Since ophthalmology, laryngology, the use of the microscope, bacteriology, and practical chemistry have been added to the curriculum of medical study, and since special courses of gynæcology, pædiatrics, dermatology, and syphilography have also been made the order of the day, it has been more and more difficult to compress within the limits of of two or three short terms the essentials of medical teaching.

Harvard has recognized this truth, and has, we think wisely, yielded to the urgent necessity of the times for greater thoroughness in medical study, a first condition of this being that more time shall be devoted to those departments which lie at the foundation of medical knowledge and practice—in the laboratory, post-mortem room, dissection room, and hospital.

The teaching of general chemistry is given up to the preparatory schools, and henceforth only medical chemistry is to be taught at the Medical School. A wholly new course is to be established, one in Clinical Chemistry, which is designed to familiarize the student with the chemical keowledge and the manipulations so essential in the recognition of disease.

A very thorough course in bacteriology is one important feature of the four-year course. We say nothing of the special courses in eye diseases, laryngology, gynæcology, etc., under recognized experts.

It is not our desire or intention to advertise or eulogize the Harvard Medical School, but when any great public institution has done a good thing and made a noise in the right direction, we think that such action

should be noticed and commended. It is doubtless true that in the fierce competitive strife few medical schools could afford to take the stand which Harvard has taken; rather is it their policy to offer extraordinary inducements to students, removing, rather than adding, difficulties. At the same time, the country could well dispense with medical schools that are run mainly to help a few ambitious men to obtain notoriety and make money, while those institutions which aim first and principally to advance and keep high the standard of medical education (whether thereby they attract students or not) will, we are persuaded, be patronized and supported by the better portion of the medical profession and of the community.

FOLK-LORE IN MEDICINE.

Under the title of "Skatological Medicine," the British Medical Journal, June 11, 1892, editorially discusses this subject. Religious rites and folk-medicine are so intimately associated among primitive folk that it is impossible to study the one without learning much of the other.

If we commence the history of medicine with Hippocrates, we shall take but a partial and very imperfect survey of the origin and progress of our art. The teachings of anthropology and the increased attention paid to folk-lore throw so much light on many obscure practices connected with our profession that no man aspiring to be a cultivated and well-informed student of medicine can well afford to neglect them.

Probably most of us who have studied ancient prescriptions, and read with disgust the list of horrible ingredients which patients in the olden time had to swallow, thought that the Greek, Roman, and mediæval physicians had very nasty ideas, and prescribed filthy remedies without any other reason than caprice and the desire to be mysterious. Investigators of folk-medicine are not inclined to dismiss the subject of the pharmacy of the past quite so contemptuously, and as the ethnologist does not call anything "common or unclean" which throws light on the habits and ideas of the human race, it is scarcely surprising that learned treatises are being written on "Ordure and Urine in Medicine."

Occult influences have been everywhere ascribed to ordure and urine and other excrementitious remedies. Hair, human saliva, ear wax, human sweat, after-birth and lochia, catamenial fluid, human semen, human blood, brain, moss growing on human skulls, lice, the tartar from human teeth, renal and biliary calculi, human bile, bezoar stones, and a host of other disgusting "remedies" have been used from time immemorial, and some are used at this day as medicines for various ailments. Pills made from the dung of the Grand Llama of Thibet are used as infallible antidotes to disease.

Dr. Mew, of the United States army, recently had the opportunity of analyzing some of them, and he stated that he found "nothing at all remarkable" in them. These sacred pills had been preserved in a silver reliquary, elaborately chased and ornamented, and they came into the possession of W. W. Rockhill, Secretary of the Legation of the United States in Pekin, through whom they were transmitted to Dr. Mew. Strange as this may seem to those who have not studied the subject, it is not at all remarkable to the ethnologist. Human and animal dung has always been a favorite medicine in some quarters of the world. Such things are never considered disgusting; the Grand Llama offers his excrement to a suffering world as a precious remedy, and the material is provided with great and solemn ceremonies and many prayers. It is not considered by any means a mere excrement, but as a symbolical alvine dejection of miraculous virtue. From the days of Pliny, the dung of almost every kind of animal has been used in medicine. Dog dung mixed with honey was prescribed for sore throat, and wolf dung as an anti-colic. Goat dung was considered of great value in tumor of the spleen, and cat dung for gout in the feet. Lion dung was an anti-epileptic, and mouse dung was used in the constipation of children. Dr. Jacob Hunerwolf, in 1694, actually wrote a treatise on mouse dung as a laxative, in which he very highly extolled the remedy. Human urine is considered in many places as a most valuable tonic medicine. Daniel Beckherius, in his "Medicus Microcosmus,"

published in London, in 1660, recommends a drink of one's own urine, taken while fasting, for obstruction of the liver and spleen, for dropsy and jaundice. The urine of boys was recommended in fevers, and a "spirit of urine" was distilled for the gout.

Boyle, the great philosopher, esteemed human urine so highly as a medicine that he declared that a full account of its virtues would fill a volume. Dr. Neale, in the Practitioner, November, 1881, p. 343 *et seq.*, wrote a paper on urine, and compared it with beef-tea and Liebig extract. "Many writers have endeavored to impress the public and the profession with the true value of beef-tea, namely, that it is not a nutrient but a stimulant, and that it mainly contains excrementative materials." Dr. Brown-Séquard's remedy for the invigoration of the aged and debilitated would not be considered at all remarkable by those savage Australians of whom P. Beveridge tells in his "Aborigines of Victoria and Riverina." Pliny mentions the use of human semen as a medicine, and Avicenna prescribed it for gout. Paullini advises the dirt from soiled stockings as a remedy for epistaxis (p. 52). Dried and powdered after-birth was used as an anti-epileptic, and secundines were used for the same purpose. The curious investigator of the odd proposals and practice of men of medicine and medicine-men will find in Capt. Bourke's "Scatological Rites of All Nations" a vast amount of information on this and kindred subjects. He has compiled his great work from one thousand authorities, and, though not intended for general perusal, it is one that will interest and inform those at least who consider that the "proper study of mankind is man."

A FRENCH IMITATION OF AMERICAN ENTERPRISE.

The enterprise of Mr. George S. Davis in publishing the "Leisure Library Series" has provoked imitation in Paris, and now we see advertised by the well-known medical publishers, Rueff & Cie. the "Bibliothèque Médicale," the works and the authors being especially selected by Charcot and Debove.

The books are published in a style similar to the numbers of the "Leisure Library," but are all bound in cloth, and each number sells for about 60 cents.

Book Notices.

TREATISE ON THE DISEASES OF WOMEN; FOR THE USE OF STUDENTS AND PRACTITIONERS. By Alexander J. C. Skene, M. D., Professor of Gynæcology in the Long Island College Hospital. Second edition, revised and enlarged, with 251 engravings and 4 colored plates. Pages, 968. Published by D. Appleton & Co., New York. 1892.

Perhaps no branch of medical and surgical practice has grown with such rapid strides as gynæcology. The numerous elaborate works on this subject attest the interest of the profession in this specialty and the demand there exists for the latest modern views of treatment.

Dr. Skene's book is used as a text-book in many medical schools, and this, the second edition, evidences its popularity.

To this edition new chapters have been added on Ectopic Gestation, Diseases and Injuries of the Ureters, Vesical Hernia and its Surgical Treatment, and the latest views of the author are presented on laporatomy, ovaritis, and injuries of the cervix uteri and pelvic floor.

In these days of rapid development of the gynæcological art and in the confusion incident to the impressions formed by the many workers in this field, the reader will turn restfully and thankfully to this careful and conservative record of the views and experience of Dr. Skene. The work is not, as many are, a compilation of conflicting theories and of too hasty conclusions, but a well-digested, judicial, and safe guide to the intelligent and efficient treatment of a class of diseases which demand the most earnest consideration of every practitioner.

MANUAL OF SKIN DISEASES, WITH SPECIAL REFERENCE TO DIAGNOSIS AND TREATMENT; FOR THE USE OF STUDENTS AND GENERAL PRACTITIONERS. By W. A. Hardaway, M. D., Professor of Skin Diseases in the Missouri Medical College, and in the St. Louis Post-Graduate School of Medicine. Lea Brothers & Co., Publishers. 1892. Pages 434.

The author's contributions to the literature of dermatology are well known. This book was at first designed for the use of those attending Dr. Hardaway's course in this branch of medical practice, but has been

elaborated to meet the requirements of the general medical public.

The book is divided into three parts; the first being a general introduction to the study of skin diseases, the second an alphabetical arrangement of diseases for ready reference, and the third portion consisting of an appendix containing additional formulæ and a diet table.

For the purpose for which it is designed the book is well adapted. It is direct, definite, and practical, and will serve to direct to the proper treatment of skin affections those who meet with these cases in general practice.

How to Feel the Pulse, and What to Feel in It.—Practical Hints for Beginners. By William Ewart, M.D., Cantab., F.R.C.P. With Twelve Illustrations. Published by William Wood & Co., New York. 1892. Pages 112.

This is an excellent and highly practical little book on the pulse, the full significance of which as an aid to diagnosis or an indication for treatment is too frequently overlooked. It is well worth reading, not only for the novice and the student, but to refresh the minds of practitioners as to many points which routine practice has dimmed their knowledge of.

Proceedings of the Philadelphia County Medical Society. Vol. XII. Session of 1891. T. B. Schneideman, M.D., Editor.

This well-printed volume of 429 pages, with sixty-five selected papers, bears tribute to the excellence of the work being done by this energetic society of medical workers.

The Uses of Water in Modern Medicine. By Simon Baruch, M.D. Vol. II.

Cerebral Meningitis. By Martin W. Barr, M.D.

These two volumes are the latest additions to the Physicians' Leisure Library series, published by George S. Davis, Detroit.

The first volume of Dr. Baruch's book has been very favorably noticed by the medical press. A review of both volumes, and also of Cerebral Meningitis, will appear in the Age of July 10th.

Notes and News.

Flowers for the Sick.—

The curative resources of the medicine are not all included even within the compass of a bulky pharmacopœia. Nature has provided us with many such which are not the less potent in their proper place because they do not require to undergo any process of ordinary chemical preparation. Rest, exercise, diet, and the various methods of sanitation belong to this class. So likewise do numberless means of impression by which the mind is reached through the senses. The stimulant attraction of beauty is a suggestive example of this kind. It has from time immemorial been thus employed in a variety of ways, but never probably on so large a scale or with so great acceptance as where flowers have been its exponents. We are all aware of the fact that among ourselves the distribution of these to the sick has long been carried out by a special organization, and the willing support which this body has always received is an excellent guarantee of the quality of its work. We cannnot perhaps exactly trace its effects, but we know enough to be able to appreciate its refreshing influence upon mind and body when harassed by disease. Clearly, then, so useful a means should possess every facility in its mode of use. Instead of this, it is often found that flowers, though fresh and beautiful when cut, are, on their arrival at the bedside, crushed, withered, or decayed—no longer an aid to health, but a positive source of disease.

"Lilies that fester smell far worse than weeds."

Faults in packing, the failure to exclude air in particular, delays in transit or in distribution, and excessive handling by distributors, would account for their altered condition. A little care and forethought should eventually prevent this perversion of what must otherwise prove to the sick a real and unmixed benefit.

Folk Medicine in Russia.—

Slovo, of Kiév, reports some curious instances of popular doctoring in South Russia. The rural dentist places his patient upon a

little stool and examines him. If an upper tooth is to be pulled he performs the operation with a simple pair of tongs like that used by cobblers. But if a lower tooth is to be extracted the operation is more complicated. The tooth is tied very skilfully with a violin string. The other end of the string is fastened to a hook in the ceiling. Then the stool is removed with a jerk from beneath the patient, who falls, his tooth remaining on the string, sometimes with the flesh around it. Intermittent fever is cured either by live frogs or by fright. When the sickness breaks out the patient is made to carry about him as many live frogs as can be put in his clothes. If that treatment does not help the patient his fellow-villagers try to frighten him. The most popular method of doing that is known by the name of Likaniye. A crowd of men and women come into the house and raise a quarrel with the patient. They treat him to the loudest and most offensive terms of reproach. That naturally irritates him, and he answers in similar terms. The crowd takes offense at his rude expressions and resolves to lynch him. A rope is put around his neck and he is dragged about until he is insensible on account of fright.—*The Sun.*

The Prince and the Doctor.—

The well-known English physician, Dr. Sinclair Coghill, recently sued Prince Clovis Bonaparte for compensation for services in having attended Madame Rosalie Bonaparte when she was sick. In answer to Dr. Coghill's suit, Prince Clovis asserted that the services performed by the doctor were not of a character for which a husband ought to pay, and that the relations between Dr. Coghill and Madame Bonaparte had not been medical, but immoral. Dr. Coghill's answer to this was that Prince Bonaparte was only a blackmailer, and was trying not only to evade his honest debt, but also to extort money by making false charges, and that it was with the view of meeting this issue squarely that he (Dr. Coghill) had brought this suit. The jury believed the doctor, and disbelieved the prince and Madame Bonaparte. They gave a verdict to Dr. Coghill for the full amount of his claim.—*Medical Record*, June 4, 1892.

A Murderer's Muse.—

Dr. Carlyle W. Harris, of New York, who is accused of substituting morphine for quinine and thus killing his wife, is a poet as well as a medical student. Among his numerous poems now being published by the newspapers is one entitled:

SLEEP.

Thou tender, loving mistress of mankind,
Soother of pain by touch of soft caress,
Come near and press my eyelids with thy lips,
And lull me into sweet forgetfulness.

Smooth from my brow the furrowed line of care;
Upon my forehead let thy cool palm lie,
My aching forehead; to the throbbing brain
Sing thou a sweet and soothing lullaby.

Sing me a dream of groves and leafy trees,
With twinkling rivulet and flowery bush,
And bright-hued daisies nodding to the breeze,
Beneath the flight of bobolink and thrush.

Waft to mine ears the murmur of the brook,
Along whose banks the trailing willows weep,
Then, with thy soft, warm arms encircling me,
Pillow my head upon thy breast, O Sleep.

Infection by Telephone.—

The possibility of infection by the use of the telephone mouthpiece by successive speakers has been hypothetically discussed before now. A correspondent of the British Medical Journal brings forward some facts in support of the possibility of such an occurrence. Dr. Anderson, the Medical Officer of Health for Dundee, who has had the matter submitted to him, has given a very sensible answer, which sums up the position in a practical manner: "If a person who is suffering from sore throat of an infectious nature brings his mouth into close, or even near, relation to the mouth-piece of a telephone instrument, I think, in the act of speaking and expiration of air from the lungs and throat, it is possible that infectious particles might adhere to the instrument. I think an instrument which is so much exposed to the human breath should be frequently cleansed, whether the instrument be in a public or private room, and perhaps the simplest and most convenient cleanser is warm water and carbolic or other disinfectant soap."—*Medical Record*, June 6, 1892.

The Results of Two Hundred Labors without Internal Disinfection —

Mermann has continued in the clinic at Mannheim his usage in conducting labors without internal disinfection, and records in the Centralblatt für Gynäkologie, 1892, No. 11, the results in 200 recent cases. He had but one death, and that from rupture of the uterus complicated by placenta prævia and a large amount of amniotic liquid. In the 200 cases there were 36 which presented complications of greater or less gravity. These cases complete a series of 700, presenting no death from septic infection. The morbidity rate was 6 per cent. In the last 200 cases there occurred but 2 cases of mild ophthalmia, and in all less than 10 cases of conjunctivitis were observed among infants. Mermann's practice is to omit injections, and, whenever possible, to also omit internal examinations, relying upon palpation and auscultation and a close observation of the case.—*American Journal of the Medical Sciences*, May, 1892.

Deaths of Eminent Foreign Medical Men.—

The deaths of the following members of the medical profession abroad have been announced: Dr. E. Nagel, formerly Professor of Surgery and of Ophthalmology in the University of Clausenberg; Dr. Mühsam, Sanitary Councillor of Berlin; Dr. Abel, of Stettin, Surgeon-General of the Prussian Army; Dr. Theodor Meynert, the well-known Vienna Professor of Mental and Nervous Diseases, at the age of fifty-nine. The writings of the last-named on the functions of the brain have made his name familiar to medical circles throughout the world. He had been in retirement for some little time, owing to his mind having been affected after the death of a favorite child.—*The Lancet*, June 4, 1892.

Increase of Medical Students and Graduates.—

The records of medical students and graduates in the last twenty years in the United States show a gradual increase, from about six thousand in 1870–71 to over thirteen thousand in 1888–89. About every decade there is a slight lull. Thus, in 1872 the students fell off nearly one thousand, and in 1883–84 they fell from thirteen thousand to twelve thousand. Since 1884–85 the increase has been steady, the annual rate being from five hundred to one thousand; and in 1891–92 there were probably fifteen or sixteen thousand medical students in this land.

Estimate of Medical Graduates for 1892.—

So far, fifty-five medical colleges in this country have graduated two thousand five hundred and sixty-eight students. As there are over seventy-one more colleges to hear from, the supply of doctors this year is likely to equal the demand. At present rates five thousand new doctors seems a reasonable expectation, and their work among the sixty odd millions of population is something to be looked forward to with interest.—*Doctor's Weekly.*

A New Medical School for Chicago.—

The present medical colleges of Chicago are not sufficient for its greatness, and a new institution, to be conducted on new lines and in a thoroughly fresh and, we take it, "brainy" way, is proposed. The name of the new institution is the "Clinical College of Medicine and Specialty Hospital," and it already has a lot 131 x 182. Instruction is to be given by demonstration and recitation. No didactic lectures will be given. We should judge that the Clinical College has got the right ideas of teaching.—*Medical Record.*

The New York College of Physicians and Surgeons.—

This body held its annual commencement on June 8th, and graduated a class of 116. The degree of LL.D. was conferred upon Dr. Fessenden N. Otis. Dr. T. Mitchell Prudden has been made Professor of Pathology. Dr. Robert F. Weir has been made Professor of Surgery, *vice* Dr. Charles McBurney, who has resigned.

Medical Journals in Paris.—

A report recently presented to the French Minister of the Interior States that 145 medical journals are published in Paris, whereas there are only 161 non-medical papers.—*New York Medical Times.*

Therapeutic Brevities.

New Remedy in Diabetes Mellitus.—Prof. Winternitz, of Vienna, recently drew attention to a domestic drug that he thought had been neglected. He related several renal cases that he had successfully treated by an extract made from the wild bilberry. His first experiments with the extract were directed towards the mucous membranes of the mouth, and finding it successful, extended his observations to the bronchi, bladder, and renal organs, where he met with equal success. He admitted having combined with the treatment the hydropathic applications, which were considered to have modified the avowed action and efficacy of the drug. Weil, of Berlin, has now added new testimony to the record of value attributed to this plant, in assuring us that it has acted in a wondrous fashion in apparently curing a young man of diabetes mellitus.

The leaves are pulled before the berries are ripe; two handfuls of the leaves are infused in two litres of water and boiled down to the half. What the therapeutic action of this preparation is Weil will not offer a suggestion, but is anxious for a future analysis, hoping that the *vox populi* may have good reason for their hypothesis.—*English Medical Press*, April 20, 1892.

Treatment of Aneurysm by Extirpation.—Kubler (Beitrage zur klin. Chir., Bd. ix, Heft 1) reports three cases in which Prof. Bruns, of Tübingen, performed extirpation of an aneurysmal sac. In each case total extirpation of the sac was followed by speedy and complete recovery. Notwithstanding the difficulty of this operation and its demands on the time and patience of the surgeon, it is strongly advocated by Kubler as being the best method of treating aneurysm of a limb. He has collected forty cases from different sources, the results of which go far to confirm this opinion. Twenty-eight of those were cases of arterial aneurysm, and in the remaining twelve both artery and vein were involved in the swelling. The aneurysm was non-traumatic in eleven cases, and the result of injury in twenty-nine cases. In eighteen cases it was seated in one of the lower, and in sixteen in one of the upper limbs. In thirty-nine of these cases, three of which were treated before the era of antiseptic surgery, the operation was completely successful. In each of the three cases treated by Bruns the sac was dissected away *in toto*, and unopened, the vessels on the proximal side having been previously tied and divided. —*British Medical Journal*, May 28, 1892.

Hydrastinin in Uterine Hæmorrhage.—Gottschalk (Therap. Monatsh., May, 1892) has used the hydrochlorate by injection into the gluteal muscles and by the mouth. In the latter instance it should not be given in larger doses than 0.05 gramme three times in the day, as it may produce unpleasant gastric symptoms. Hydrastinin acts on the vessels by diminishing their calibre, and not on the uterine muscle; hence ergot is to be preferred if the latter effect be desired. Of course, the cause of the hæmorrhage must be sought for, and if possible removed. The author says that hydrastinin is useful (1) in cases of menorrhagia in girls (without gross pathological change), (2) in cases where the uterus has been curetted, and where excessive hæmorrhage occurs at the following menstrual periods, and (3) in climacteric menorrhagia. It acts more strictly as a palliative (4) in cases of menorrhagia in irreducible retroflexion, (5) in diseases of the uterine appendages, and (6) in cases of endometritis.—*British Medical Journal*, May 28, 1892.

Result of Treatment of the Upper Air-Passages in Producing Permanent Relief in Asthma.—Dr. F. H. Bosworth (New York Medical Journal, March 26, 1892) reports eighty-eight cases of asthma, in addition to the eighty reported in 1888, treated by correcting a coexistent nasal lesion. Their treatment is based on the theory that the asthmatic paroxysm is dependent on three conditions: First, a general neurotic habit; second, a diseased condition of the intra-nasal mucous membrane; and, third, some obscure atmospheric condition (the exciting cause). Forty-two of these cases were cured, thirty-three improved, and in eleven the results are not known. In the large majority of cases the lesion was either nasal polypus, deflected septum, or hypertrophic rhinitis. Only those cases that have had at least a year of immunity are considered cured. Some of those noted as improved went for months without an attack, and in all the paroxysms were notably mitigated. The neurotic habit should not be neglected in treatment.—*International Medical Magazine*, June, 1892.

Diaphtherin.—Kronacher (Münch. med. Woch., May 10, 1892) relates his experience of diphtherin (oxychinaseptol), while Emerich (*ibid.*) shows that this drug, even in weak solutions, possesses powerful bactericidal

properties, while its toxic properties are slight. Kronacher has used it in surgical practice for more than a year, and mostly in one-per-cent. solution. In cases of ulcers, etc., and as an antiseptic in operations, it has given the desired results. No ill effects have been noticed when it has been applied to large surfaces, as in extensive operations. In a few cases it has given rise to a slight feeling of burning, but this has quickly passed away, and eczema has never been produced by it. Instruments should be placed in some other antiseptic solution, as a black deposit is formed on them if the nickel in them is not pure. Diaphtherin has been especially useful in cases of burns and ulcers of the leg.—*British Medical Journal*, June 4, 1892.

Camphoid.—We have received from W. Martindale, New Cavendish Street, and experimented with, a new preparation for which the name of "Camphoid" has been suggested. It is prepared by mixing equal parts by weight of camphor and absolute alcohol, and dissolving pyroxylin in this solution in the proportion of 1 in 40. This mixture rapidly dries, and yields an elastic film, which is unaffected by water. It forms an excellent substitute for collodion. Camphoid readily dissolves salicylic acid, carbolic acid, iodoform, and many other medicaments intended for external application. As a convenient protective it is likely to supersede sticking-plaster, as the thin film formed is not unsightly, does not present awkward corners liable to catch, and is not washed off even when moderately warm water is used. Healing of small abrasions rapidly follows the application of camphoid or of the mixture of camphoid and salicylic acid.—*The Lancet*, June 4, 1892.

For Enlarged Spleen.—The following prescription I used for ten years in the swamps of Arkansas, and it seldom failed to effect a cure when used as directed:

℞ Quinine sulph., Ferri redacti., āā ʒ ij.
Strychninæ sulp., Acidi arseniosi, āā iij grains.
Ext. gentian, q. s.

Misc. et fiat pill. No. 70. Sig.—One pill three times a day.

If the stomach is weak and will not bear more, begin with one pill and increase to three per day. Stop the fevers first for two or three days with quinine before beginning this treatment. Treatment should be continued from one to two months, or until the enlarged spleen can be no longer felt. This has served me better than any other remedy in all chronic malarial cases. For children I use soluble citrate of iron, iodide of potassium, and Fowler's solution, in syrup of orange or a suitable elixir.—B. P. Wilson, in the *Medical World*.

How to Prevent After-Pains.—T. J. Bennett says, in the Texas Medical Journal: After the third stage of labor the uterus is commonly globular in shape, owing to the fact that the circular fibres of the os do not contract so firmly as those higher up, because of the temporary paralysis from pressure and distension. To stimulate this portion of the uterus to action, introduce two or three fingers into the vagina, and gently manipulate this portion of the uterus in such a manner as to secure as nearly as possible the closure of the cervix. As hæmorrhage, barring laceration, is from the placental site, and this point is generally the fundus, and since additional force is secured to the fundus by causing contraction of the vaginal portion, the danger of post-mortem hæmorrhage is diminished, lochial discharge abbreviated, and tedious after-pains obviated.

Feeding of Infants in France.—A recent legal enactment in France prohibits the giving of any form of solid food to infants under one year of age without the authority of a prescription from a qualified medical man. The employment of the rubber-tube nursing bottle is also forbidden. Two hundred and fifty thousand infants die in France every year, and it is claimed that 100,000 of this number could be saved by intelligent care. The passage of this law is due in great measure to the efforts of the recently organized society for the protection of children, of which Dr. Rouchard is the founder. —*Cincinnati Lancet and Clinic*, June 4, 1892.

Modern Treatment of Furuncles.—Spohn recommends cotton compresses saturated with the following solution:

Hydrate of chloral, 1 drachm.
Aqua, Glycerin, āā 4 drachms.

—*Bacteriological World*, May, 1892.

Mosquito Preventive.—To rid the house of mosquitoes, evaporate gum camphor in the room by placing a piece in a plate and holding it over a lamp until the fumes penetrate the room.

Medical Progress.

HYGIENE AND PHYSIOLOGY OF THE SEXUAL SPHERE, AND THE PHYSICIAN'S RELATION TO THE LAITY AS REGARDS THIS SUBJECT.—This is a subject of universal interest and vital importance to all mankind, whether it be considered from a physical, moral, social, or medical standpoint. It lies at the foundation of all human improvement and enduring progress. The function of reproduction, as examined into by the most scientific physiologists and moralists, is considered to be the most influential of the human economy. Nowhere does knowledge mean so much, because here it materially influences morals, public health, population, disease, mortality, besides personal reputation, property, legitimacy, and even life itself. Yet in spite of this, it is a subject which is not taught in medical colleges, is ignored in text-books on physiology; even ministers are ignorant of it; and, worst of all, physicians are doing little to lift the veil of mock-modesty and hypocrisy which keeps the masses in ignorance and vice. Is it not an outrage on the people that they should be allowed to live, propagate, and bring up children in entire ignorance and darkness as to this, *the* most important of all subjects, while every trade, profession, and occupation, and every other branch of physiology are taught, and have light thrown upon them to all? True physiology teaches that in the proper exercise of any natural faculty or propensity in man there is nothing that is impure, low, sensualizing, or in any way degrading. Then is it not high time that true hygiene and physiology of the sexual organs should be taught to all? For the amount of misery, disease, and crime resulting from an abuse of these organs, through ignorance, is appalling, and few would give credit to its alarming extent. In ancient times the physical side of man dominated the intellectual; in more modern times the intellectual ruled the physical; and now the time has come for the moral faculties to govern the intellectual and all others. In early life, even while a child is yet in the cradle, bad habits are formed of touching and playing with the sexual organs, as a result of improper diet and external physical irritation. Physiology explains this in that the sexual organs are lined with similar mucous membrane to that of the mouth, stomach, bowels, and other organs, and when part of this membrane becomes irritated any part of the body covered or lined wlth this membrane may become deranged. Tea, coffee, meats, spices, and confectionery are the principal causes of irritation of these organs at this early age. If children are fed to develop permanent congestion and constant irritation of the pelvic organs, then precocious and entirely morbid amativeness must result. Such children become an easy prey, and are easily led astray by the bad influence of morally corrupt associates, to which every child is more or less exposed. None will deny that it is best that the young, especially the males, should to a certain extent be informed on these things; but is it right, is it wise, is it safe that they should be initiated into this subject by those of low morals? Is it not the parents' duty to give the children a rightful knowledge of this subject at the proper time? And is it not the physician's duty to enlighten and advise the parents on such a vital matter? If children are liable to contract bad habits in infancy, they are tenfold more so at the age of puberty, because of the sudden and rapid development of the sexual organs, with consequent great amorous impulse at this time; in fact, touching and manipulating are almost instinctively developed. As a result of such artificial excitation a child is in the most perilous danger of contracting the baneful habit of masturbation, which may mean the ruination of the victim morally, mentally, and physically. Is not the weight of responsibility tremendous on those who have the guardianship of children during this critical period? For a child without careful, watchful guidance at this time is in a worse state than a ship without a pilot in a storm, among rocks and hidden shoals. The inseparable relation of the moral and physical life is seen at this age, and it is the greatest fallacy to endeavor to separate mind and body in educational arrangements. Children must be taught to eat, drink, dress, and exercise hygienically, and be given proper moral instruction. This would greatly tend to make them healthy in body and mind, and fit for the duties and hardships of after life, and they in turn would have well-born offspring.

In marriage there are no means adopted to prevent the diseased and infirm from entering the matrimonial state and begetting children like themselves. People mate with every one and any one, regardless of health, age, temperament, and the means and ability to support and educate a family. It cannot be denied that premature, late, and ill-assorted marriages, as well as those among the diseased and infirm, are highly injurious to the procreation of vigorous, healthy offspring and to public morality; nor can it be denied that this evil exists to a most alarm-

ing extent. The disease, suffering, and vice resulting from such marriages are not confined alone to one family, but are handed down from generation to generation. Is it not essential, then, for the prevention of such catastrophes, that the public should be enlightened on this subject? If the unsound and the vicious, as well as those without the means and ability to support a family, will marry or have illegal intercourse, is it necessary, is it right, is it just that such should beget children when there are hygienic means to prevent conception?

A large per cent. of the uterine diseases and disorders result from too frequent and improper sexual intercourse, and from the same cause an equally large per cent. of men suffer from lack of vim, tonicity, and vigor. Because of ignorance, should women suffer from deplorable disease and misery, and should men fail in life and fail to attain to the highest their ability is capable of, on account of having their energy and life force sapped out through this too frequent intercourse? If men and women were enlightened on this subject they would not go to excesses and so injure themselves and each other; they would lead healthful lives, and not constantly goad the sensual passion into abnormal intensity by means of gross and stimulating food.

While eminent physiologists and scientists concede the wonderful and almost unlimited extent of pre-natal influence, the masses of the people are entirely ignorant of it. If people who are at all healthy, well-mated, and well-disposed, by taking advantage of pre-natal influence can have children who will be free from all taint of inherited disease and vice, who will only have the seeds of virtue sown, and, still further, can have children who will naturally attain to the very highest in whatever calling they are adapted for, then is it not of the most vital importance that they should be enlightened on this subject? If this were known to all, the parents who were fit to have children would have only those who were well-born, free from all contamination, capable of almost unlimited attainment; and if those not fit to have children, whether from disease, vice, or imperfection, were informed as to how to prevent conception in a proper, hygienic way, then all classes of unfortunates would soon be no more.

At the present time there is just as much disease and suffering, and consequently crime, as ever. All good influences, whether physical, intellectual, or moral, are entirely inadequate. For one sufferer relieved, one reform made, there are countless downfalls. The effect, not the cause, is being dealt with, and, while this continues, no material good can result. Every second of the hour a human soul is born into the world, and of these the majority go to take the ranks of the unfortunates, whether of the imperfect, the vicious, or the diseased. To remedy this is not in every case to prevent these unfortunates from coming into the world, but to take such measures that they will be born healthy in body and mind. To accomplish this end, physicians are largely responsible, for it is in their hands that the welfare of the public, to a large extent, lies. They are the fountain source of knowledge as to health, and on them must depend not only the cure, but the prevention, of disease; for if it is a high and noble thing to cure disease, it is far more so to prevent it. And as all true physicians have only the permanent welfare of the people at heart, they will leave no stone unturned to accomplish this end.—Sydney Barrington Elliott, M.D., in *Journal of the American Medical Association*, June 18, 1892.

Treatment of Spasmodic Torticollis.—Henry L. Shively, M.D., in the International Journal of Surgery, says: As regards treatment, an analysis of the cases reported demonstrates the little benefit to be derived from drugs except where the condition is associated with hysteria. Of the motor depressants, good results have occasionally been obtained from gelsemium. Bassette (Journal of Nervous and Mental Diseases, June 1890, Vol. i, p. 394) reports obstinate cases wnich have been benefited, and Weir Mitchell (*Ibid*, p. 417) cured two with gelsemium pushed to a full physiological effect. Morphine will control the spasm, but, as there is the dread alternative of the habit, it should be reserved in all cases as a *dernier ressort*.

Orthopædic appliances are of little use in the spasmodic form of torticollis for the reason that the patient cannot tolerate any form of fixation apparatus when the spasm is severe. Dr. M. Allen Starr has told me of an interesting case in which the spasm was checked by making pressure over a circumscribed area about the occipital protuberance to which pain and tenderness were referred. At the Orthopædic Dispensary an apparatus, a modification of the Taylor spinal assistant, was applied in such a way as to make constant pressure upon this hyperæsthetic spot. This patient returned to the dispensary a few weeks ago reporting a complete cure. A similar case is that of a prominent New York politician who suffers from spasmodic attacks of torti-

collis, and finds that he can relieve the painful contraction by pressing on the back of his neck with the head of his cane or the handle of an umbrella. Most of the cases of true spasmodic torticollis, however, are not amenable to such simple means of treatment, and either go unrelieved or come to operation. The results of resection of the spinal accessory nerve, as in the present case, are usually good and the operation can now be considered well established. Petit (L'Union Médicale, July 9, 1891) has collected twenty-six cases. Of these, thirteen were entirely cured; seven sufficiently improved to resume their habitual occupations; in five, the relief was but slight, and there was one death from erysipelas. The incision upon the anterior border of the sterno-mastoid is the one usually preferred. Stretching the nerve has been tried, but the results are unsatisfactory. Simple division does not give as good results as where a considerable portion of the nerve is excised. Collier (Lancet, June 21, 1890, p. 1354) reports a case successfully treated by ligaturing and compressing the nerve with a tightly twisted silver wire. An unsuccessful case similarly treated is reported by Deaver and Mills (Journal of Nervous and Mental Diseases, Vol. xvii, p. 834). In the same journal (p. 832) an interesting case illustrating the failure of even the most radical surgery is reported by Morris J. Lewis. In his case both sterno-mastoids were entirely removed and both spinal accessories excised, but the tonic spasm and faulty position of the head persisted.

In cases where the deep posterior rotator muscles of the head are involved, Keen has described (Annals of Surgery Journal, January, 1891, Vol. viii, p. 44) a method of excising the posterior divisions of the first three cervical nerves which supply the splenius capitis, rectus capitis posticus major, and the obliquus inferior, the muscles chiefly implicated. This procedure is not always necessary, however, even where there is spasm of the deep muscles, as is shown in the present case, in which there has been for months a continuous improvement following excision of the spinal accessory alone.

AVOIDABLE LACERATIONS OF THE PERINEUM.—Many are the articles which have been written concerning the perineum; the functions of that body, and its supporting properties, have been discussed in many a warm debate; anatomists have given exhaustive descriptions of its gross and minute structure; obstetricians have suggested numerous methods for the prevention of its laceration; and nearly every ambitious gynæcologist has proposed an operation for its restoration after laceration, or modified a previously existing operation, and yet the probabilities are that the average practitioner of medicine, unless he be a close reader of the current periodical literature of obstetrics, fails to realize how frequently laceration of this body occurs, not only in the practice of others, but even in his own practice.

The failure to properly recognize this condition is, in great part, due to the hasty and comparatively indifferent manner in which many men attend their cases of labor, and to the neglect to make a thorough ocular examination of the parts after labor is completed. Honest, truthful men, of large experience, often state that they have had but six or a dozen, or even less, cases of perineal laceration occur in their practice. Such statements are, undoubtedly, honestly made in the majority of instances, but still are far from being correct, being born of ignorance —not that these men do not possess the ability to recognize a laceration, but simply from failure to make an effort at recognition.

Text-book authorities state that the statistics as to the frequency of laceration of the perineum are of but little value, as *they vary with the skill of the observer*—a point certainly worthy of thoughtful consideration. It is somewhat appalling to know that from thirty to thirty-five per cent. of all primiparæ are lacerated, to a greater or less extent, not including slight tears of the *fourchette*. Such, however, is believed to be the percentage of lacerations actually occurring in the practice of the average physician of ordinary skill and ability.

Schroeder found tears in 34.5 per cent. of primiparæ, and Olshausen in 21 per cent. Alice McLean Ross reports, from the Detroit Woman's Hospital, 197 primiparæ confined during a period of four years, of whom sixty-four, or 32.48 per cent., were lacerated. These women were attended by recent graduates, with but little practical obstetrical experience, but who would, naturally, give to their patients close attention and all of the skill which they possessed.

It would seem a safe statement to say that at least 30 per cent of all primiparæ are, under ordinary circumstances, lacerated during labor.

The question at once arises as to what proportion of the lacerations are avoidable. Olshausen believes that unavoidable lacerations occur in 14 per cent. to 15 per cent. of all primiparæ, and these figures are generally accepted as correct by most writers.

Summing up: 30 per cent. of all primiparæ are lacerated; 15 per cent. are unavoidably lacerated; 15 per cent. are unnecessarily lacerated. In other words, one-half of all the lacerations occurring in primiparæ are avoidable by the exercise of care and skill, which every physician not only can attain, but also should attain.

The lowest percentage obtained by any obstetrician ought to be the rule for all, as, in so simple a matter, what is one man's ability ought to be every man's ability.—Charles N. Smith, M.D., in *American Gynæcological Journal*, May, 1892.

THE MANUAL TREATMENT OF NOCTURNAL ENURESIS.—The method originally suggested by Thure Brandt—whose contributions in the field of massage are so well known—has been modified by Dr. Julius Csillag. Briefly described, it is as follows:

The patient is placed in the lithotomy position, and the physician introduces his right forefinger into the rectum, and seeks the urethra below the symphysis. Then, following its course in the direction of the neck of the bladder, presses the urethra against the bone and exercises a slight vibrating pressure with the finger. This is repeated five or six times. In the meanwhile the fingers of the left hand press externally in the direction of the internal finger and simultaneously execute this vibratory pressure. This act, which, as has been said, is repeated five or six times, is designated by Csillag as pressure of the vesical sphincter. That the bladder should be emptied previous to this part of the treatment is obvious.

The patient is kept in the same position, and the physician, holding his hand parallel with the axis of the body, presses deeply into the pelvis with the finger-tips, and again executes a vibratory pressure. This is repeated twice or thrice, and is called by Brandt a pressure of the hypogastric plexus.

The patient is laid upon the back, with the limbs outstretched and lying parallel to each other. The physician then grasps the patient by the ankles and pulls them apart, encouraging the patient, meanwhile, to endeavor to resist his movements. Now the patient brings his legs together, the physician resisting the movement.

The patient is again placed in the lithotomy position, but with his knees together. The physician stands at the side of the patient and presses the knees apart, the patient meanwhile offering resistance. Then the patient brings his knees together, while the physician offers resistance. By means of these last two exercises, the adductors and abductors of the thigh and the recti abdominalis muscles are brought into play, but simultaneously also the muscles of the floor of the pelvis are exercised. The anal sphincter contracts forcibly, and with it the vesical sphincter, owing to the synergism of the two muscles.

The patient stands, bending slightly forward, and resting his hands against a table crosses his legs, and then, upon command of the physician, contracts the anal sphincter as though he were endeavoring to restrain a movement of the bowels. This exercise, which can be intrusted to the care of the parents of the child, should be repeated four or five times in succession, and repeated hourly. It tends to greatly strengthen both the anal and vesical sphincters.

The physician then stands to the left of the patient, and with the tightly closed fist strikes the sacrum. The movement of striking should proceed from the wrist only. The striking of the sacrum slightly excites the nerves leading from the spinal column to the organs in question.

Csillag's method is based upon sound physiological and hygienic principles, and is well deserving of thorough trial.—*Philadelphia Medical and Surgical Reporter.*

THE REST CURE.—Before the New York Neurological Society, Dr. Warton Sinkler, of Philadelphia, read a paper on the rest cure as conceived and elaborated by Dr. Weir Mitchell. The integral parts of this plan consist in isolation, rest in bed for a number of weeks, massage, over-feeding, the use of general galvano-faradism, together with an absence of all mental or physical activity on the part of the patient. The treatment, Dr. Sinkler said, proved efficacious in cases of neurasthenia, hysteria, migraine, Pott's disease, in all uterine disorders dependent upon congestion or in which congestions aggravated existing genital abnormities, and in the various insanities due to exhaustion. In the discussion which followed, Dr. Allen Starr praised the Weir Mitchell treatment, acknowledging its efficacy and recognizing its unmistakable curative effects. At the same time he thought these were largely due to hypnotic suggestion. Thoroughly radical betterment took place only in Philadelphia as a rule. Because it was difficult and distant, the patient in about ten days—and the patient's family as well—could be raised to the highest state of expectation by a course of judicious lectures from the physician in charge. The woman went to Philadelphia

expecting to get well. The family also expected it; and the environment being everything that could be desired, the expected arrived. While admitting that neurasthenia and hysteria might be greatly improved by isolation, rest in bed, over-feeding, etc., Dr. Barney Sachs thought one class of women, often erroneously called hysterical, must of necessity be harmed, possibly beyond redemption, by such a secluded and introspective plan. He referred to hypochondriacs, the so-called hysterics who fail to recover by any such isolation or self-centered method.

One of the dangers of the treatment Dr. George Jacobi considered to be an hereditary tendency to obesity, citing an instance where the rest cure had resulted in an abnormal deposit of fat. At his advice the cure had been undertaken, and for the result he had unfortunately been held responsible. The inability to get patients to carry out this treatment in New York was somewhat lamented by Dr. Landon Carter Gray, who, in the main, seemed averse to isolation and rest in bed for cases of melancholia in particular, and to massage in general. Depression of spirits, he thought, was increased by the solitude of a patient with one attendant. Mechanical massage (Ling's Swedish movements as applied by Dr. Charles Fayette Taylor's apparatus) used at Bloomingdale, Dr. Lyon thought of great value among the insane, the personal element being entirely eliminated, and most of the advantages of manual massage being retained. The rest cure for floating kidney was advocated by Dr. Leonard Weber, who cited a case greatly benefited by it. In the opinion of most of the speakers, the modified form of rest cure seemed best adapted to the majority of cases in which this plan of treatment is indicated. —*New York Medical Times.*

La Femme Nerveuse.—So many varied conditions go to make up that mysterious entity, the nervous woman, that we are somewhat surprised at Deschamps' temerity in attempting to study her from a psychological and psycho-therapeutic standpoint (Bulletin gén. de Thérapeutique, February 15, 1892). There are plenty of neuropaths among the men, and it is highly probable that there would be quite as many nervous men as nervous women if every man possessed a uterus and a pair of ovaries. The essayist does not take this view of the question, however, but thinks woman is the being in whom, by heredity and culture, the nervous system has taken on the more intense development. For him the "nervous" are those who, endowed with an exaggerated sensibility, have not sufficient reasoning power to direct their volition. He divides them into three principal classes—the cerebral, the genital or sensual, and the neuropathic. In the first class we find a type of the superior sort of woman, who combines with finesse, tact, and delicacy frankness, high-mindedness, disinterestedness, and a taste for manly occupations; for she is intelligent and directed in her acts by the things of intelligence.

Voluptuous preoccupation characterizes the sensual. She is clever, bright, but indelicate. She is cunning, but a cheat, and given to dissembling and prevarication. If circumstances warrant it, she loses all reserve, all check, and all sense of shame. The gifts of honesty and straightforwardness, which her cerebral sister enjoys, are here not to be discovered.

The simple neuropath is not so interesting a creature. She is the plebeian of nervous womankind. If of sensitive nature, she is ready to be ruffled by any passing trifle, and foolishly moved by every little thing. If of the motor variety, she is never quiet or at rest, makes much ado about such nothings as directing her household affairs, and gives herself the airs of a hero taking a city by storm. She is convinced that nothing would go right without her superintendence, and in many other ways is quite as disagreeable as the sensitive neuropath.

The treatment of this condition is one of prevention. It is in the infant that we must study the woman of the future, and by physical and moral education strive to cultivate the *volonté* and combat the *caprice.*

Instruction should have for its aim the development and formation of the intelligence; there should be a broadening of the mind, so that the young girl should learn to reason and understaud the ridicule which her caprices will bring upon her. The various ways of influencing the youthful mind to this end, as set down by the writer, are worthy of consideration, and if their application will result in a generation of strong-nerved women it will be much more practical than any subsequent attempt to cure by hypnotism, drug medication, or injections of nerve matter.—*Medical Record,* June 11, 1892.

Cancer (?) or Ulceration of the Stomach Cured by a Diet of Frozen Milk.—E. M. Hale, in New York Medical Times, says: The subject was an old gentleman between sixty and seventy years of age.

He was given up to die by his physicians in a small town in Indiana. He was removed to Chicago to end his days at the residence of his daughter. He had not been able to retain any food on his stomach for many months. Rectal feeding had been tried, but not very successfully. He was greatly emaciated, and almost demented. At the earnest request of his daughter I took charge of the case, but first called in consultation the late Dr. H. A. Johnson, whose diagnosis was cancer of the pylorus. A distinct nodular swelling was found in that region. For a time he was fed by rectal injections of Rose's peptonized beef and Cornish's preparation. At every attempt to give any liquid food by the mouth intense gastralgia and vomiting followed.

To relieve the pain cocaine was tried, without effect, as were all other medicines. Ice-cream was tried, but it invariably caused such pain that its use was abandoned. He craved milk, and could sometimes take a small quantity ice-cold. It occurred to me to try frozen milk, and I found he could take half an ounce at one time with less pain than any other food. Having used codeïne sulphate in a similar case with great relief, in a patient who eventually died from cancer of the pylorus, I prescribed a syrup of codeïne sulphate (one-half grain in each teaspoonful of syrup of tolu); he was given a teaspoonful every six hours, day and night.

After this was commenced he could take one ounce of frozen milk every two hours without suffering from gastralgia or vomiting. The milk when frozen was not hard, but soft and friable. The best fresh New Jersey milk was used. He steadily improved under this treatment. Rectal alimentation was abandoned. For six weeks he used no other food. Then the codeïne was gradually abandoned, and beef-tea gradually given, alternating with frozen milk. At the end of three months he went back to his Indiana home cured. He could eat any food he desired. He lived for five years in good health. He died of typhoid fever.

BROMAMIDE: A NEW ANTIPYRETIC AND ANTINEURALGIC REMEDY.—Dr. Augustus Caillé writes in the New York Medical Journal:

This drug is described by its discoverers, Messrs. F. H. Fischedick and Charles E. Koechling, of New York City, as a new bromine compound of the anilide group, containing 75 per cent. of bromine ($C_6H_2Br_3NH.HBr$).

It is in the form of colorless, needle-shaped crystals, nearly odorless and tasteless, insoluble in hot or cold water, slightly soluble in cold alcohol, and soluble in 16 parts of boiling alcohol. Chloroform, ether, and the fixed oils dissolve it, but it is insoluble in benzine. Its action toward litmus paper is neutral. It is a very stable compound, not being affected by any of the ordinary reagents. It melts at 243° F., and volatilizes at 310° F. without change, subliming in beautiful feathery crystals.

Bromamide was first given to dogs and rabbits, in doses of 2 grammes (30 grains), without noticeable deleterious influence and without affecting the composition of the blood in these animals. The administration of from 0.6 to 1 gramme (10 to 15 grains) to healthy adults was followed by a slowing of the pulse without sweating. The administration of 0.06 to 0.2 gramme (1 to 3 grains) to children from one to three years of age was accomplished without untoward symptoms.

Bromamide was administered symptomatically in a number of cases of neuralgia from various causes.

1. Compression myelitis, with intercostal neuralgia; no beneficial effect from 10 to 20 grains of bromamide.

2. Premenstrual headache; 15 grains of bromamide: marked relief in two hours.

3. Reflex hemicrania from carious tooth; 15 grains of bromamide; relief in three hours.

It will be seen from a perusal of the foregoing that the trials thus far made are encouraging, and may warrant further experiments, especially in other forms of disease.

Bromamide has the power of reducing the temperature in most cases of febrile disease from 1° to 2.5° F., without the excessive sweating as produced by other antipyretic drugs. It has no pronounced diuretic action, and it is, so far as could be ascertained, free from unpleasant symptoms as regards the digestive tract.

Bromamide can safely be given in 10- to 15-grain doses several times a day as an antipyretic and antineuralgic to adults, and in doses of from 1 to 5 grains to children. It may be given in capsule, in water or dry upon the tongue, or suspended in a fluid.

TINNITUS AURIUM.—Dr. Louis Lewis states (Times and Register) that subjective impressions of sound, or noises heard from within the head, are produced in just the same way as objective impressions from without. Hearing is excited, in both cases, by vibrations communicated to the labyrinth,

and thence telegraphed by the auditory nerve to the sensorium, and the more forcible the vibrations the louder the sound. Vibrations may likewise be carried directly to the brain, through the petrous part of the os temporalis, which is in touch with the adjacent cranial bones; but these sounds are vague and indefinite, being conveyed independently of the apparatus specially devoted to audition. Impressions from without are, of course, of infinite variety, while those arising from within are about limited to sounds of "buzzing," "humming," "jingling," "rushing," and "roaring;" all comprised under the name of "tinnitus aurium." These sounds may be simply due to impacted wax in the external passage, or to decayed teeth. But they may occur in many diseases of the organ of hearing, as gout and rheumatism of the ear, inflammation of the auditory nerve, or of the semi-circular canals (Menière's disease), catarrhal congestion of the eustachian tube, etc.; in some brain affections, as cerebral hyperæmia, congestion, inflammation, and aneurysm; in hysteria, nervous exhaustion, migraine, valvular disease and functional disturbance of the heart; in some exanthematous fevers; occasionally, as a warning of epileptic seizures and "change of life," and as a sequel of influenza. The internal administration of certain drugs will also give rise to tinnitus, as quinine, salicin, antipyrin, and their compounds, large doses of iron, and some narcotics. Many persons can readily evoke peculiar sounds by contracting the tensor tympani muscle, and drawing the membrana tympani inwards, during the acts of swallowing, yawning, "blowing the nose," etc.; these, however, are not truly subjective impressions, and they certainly do not come from without. They are produced from within by mechanical means. True subjective sounds may also be excited by electricity.—*Doctors' Weekly.*

Is Uric Acid a Prime or Sole Factor in the Causation of Rheumatism?—W. E. Shotwell, in the Philadelphia Medical News, says: In my experience with rheumatic affections, I have so frequently noticed this excessive formation of uric acid, as shown by an examination of the urine, that I regard it as symptomatic of a tendency to rheumatic troubles, even before the patient has the attack. Uric acid is produced in the system by a stimulating, nitrogenous diet and the use of alcoholic beverages. In the treatment of rheumatic affections we first prohibit entirely, or allow very sparingly, according to the nature of the case and the condition of our patient, an animal diet and alcoholic beverages, especially wines and beers. Next we give the saline mixtures of potassa and soda and the salicylates. Why? Because clinical experience shows such the best course to pursue.

Does not this treatment lessen the quantity of uric acid, which, by its irritating influence upon the lower-grade tissues of the body, gives rise to the rheumatic attack, consequently checking or "curing" the rheumatism? A case of sciatica, due to rheumatism, remains quiescent so long as the excretion of uric acid is normal in quantity, but as soon as the urine shows an excess, exacerbations manifest themselves, which disappear as if by magic when the quantity is lessened to normal by a few doses of salicylate of soda or carbonate of lithium—washing out, as it were, the excess of uric acid from the system.

If such be the case, as clinical experience tends to show, that uric acid in excess is a sole or prime factor in the causation of rheumatic affection, have we not the "key" of the trouble, whereby we may prevent a rheumatic attack in the education of our rheumatic patients to abstain from too free indulgence in an animal or nitrogenous diet and the imbibing of alcoholic beverages? Also, in the examination of their urine, as to quantity, appearance, hyperacidity, etc.; in the use of the mineral waters—Vichy, Seltzer, Carlsbad, etc.,—as occasion may demand.

Artificial Fecundation in Uterine Displacements.—At a meeting of the Association of Internes of the Hospital Nôtre Dame (Union Med. du Canad.; Med. Rev.) Dr. M. T. Brennan read a paper on this subject, in which he arrived at the following conclusions, based upon two successful cases:

1. Artificial fecundation appears to be useful, under certain restrictions, in displacements of the uterus in which the adhesions to the neighboring parts are not too strong.

2. It should not be employed when the slightest inflammatory complications exist.

3. The sequelæ of parturition should be carefully watched and the aid furnished by pregnancy should be utilized to correct and maintain corrected the uterine displacement.

4. Faradization should be employed until involution is complete.

5. In order to favor this last all signs of subinvolution should be carefully attended to.

6. It is important to assume no responsibility in regard to the result of the operation, or the natural or social consequences which may result from it.

7. In one case pregnancy lasted 264 days; in the other 273 days.

8. The result of the fecundation, regarded in the light of an operation, was perfect.

9. As a therapeutic measure, it favored a slow breaking up of the adhesions, and rendered a subsequent course of treatment more efficient.—*Archives of Gynæcology, Obstetrics, and Pediatrics.*

Condurango and Nux Vomica—Effect on the Gastric Secretion.—Dr. Wagner reports (Arch. gén. de Méd.) the results of his investigations on the effect of these two drugs upon the gastric juice. The observations were made on twelve patients, nine of whom were hypopeptic and three hyperpeptic (according to Hayem and Winter, patients are said to be hypopeptic when the elements of the gastric juice are below the normal standard, and hyperpeptic when those elements are above the normal standard). No treatment was adopted until the average composition of the gastric secretion had been ascertained. Then the action of the drugs was determined by administering them once only with Ewald's test meal, and also regularly for four, seven, or ten days—the contents of the stomach being withdrawn one hour after the meals by means of a soft tube, filtered, and divided into two parts, one of which was examined by Winter's method, while the other was tested for free hydrochloric acid, lactic acid, and peptones.

As regards condurango, the author concludes that it assists digestion to some extent, but that it is not able to produce any *lasting* change in the gastric secretion. As for nux vomica, the alcoholic tincture was found to act favorably in *hypopepsia* both in respect to the quantity and quality of the digestive fluid; but in apepsia it is reported to be without effect, and in hyperpepsia contra-indicated. According to Dr. Wagner, therefore, the action of nux vomica as a digestive is superior to that of condurango—the effect of the former being quite permanent, while that of the latter is fleeting.

Chloride of Iron in Typhoid Fever.—Dr. J. W. Anderson describes in the British Medical Journal a mode of treatment for typhoid fever which he has found very effectual. It consists in administering a full dose of the liq. ferri perchloridi fort., namely, 5 minims (for an adult), every hour of the day and night until a week has elapsed from the complete subsidence of the fever. To enable the patient to take this, the dose is combined with half a drachm of glycerin or 1 drachm of simple syrup, and a few drops of tinct. zingib. fort., and diluted in half a tumblerful of water. If sickness is caused, 5 grains of bismuthi subnit. are given ten minutes before each dose of the medicine until nausea ceases to be produced. In a few days the diarrhœa will be arrested, and thereafter a mild aperient must be given daily as long as the medicine is continued. In a moderately severe case, not brought under this treatment until the end of the first week of fever, it will take, the writer says, ten days to reduce the temperature to normal. If the medicine is not given every hour night and day, it will take a little longer; if begun within two or three days of onset of fever, the latter will be gone in about five days.

Don'ts for the Eye.—Never prescribe for an inflamed eye without doing these three things, viz.:

1. Without examining for a foreign body imbedded in the cornea, or lodged beneath the lids.

2. Without seeing if cornea or iris is implicated.

3. Without determining the presence or absence of tension of globe.

Never use violence in opening the eye, if there be much swelling or spasm, because, if there be a deep ulcer of the cornea present, perforation may take place.

Never apply lead lotion (Goulard water) should there be the slightest abrasion of the corneal epithelium. (Solid particles of oxide or carbonate of lead become deposited and form permanent opacities.)

Never trust the nurse with verbal instructions for washing out the baby's eyes in infantile ophthalmia. Do it yourself.

Never forget that wounds of the ciliary region are most dangerous, and if they involve the lens, or if they are attended with loss of vitreous, they need excision of the eye.—*Doctors' Weekly.*

The Treatment of Asthma.—At the onset, by means of a brush an application of a 5-per-cent. solution of cocaine hydrochlorate is made to the nasal fossæ as high as possible, or the nares and throat may for four or five minutes be sprayed with the same solution. Should the attack not be aborted, from six to twelve drops of pyridine on a handkerchief should be inhaled; if the attack has reached its acme, a twelfth of a grain of morphine hydrochlorate hypodermatically, and if necessary repeated at an interval of a quarter of an hour.—Dieulafoy, *L'Union médicale*, No. 48.

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Original Articles.

THE MODERN TREATMENT OF DIPHTHERIA.*

BY DR. DUBOUSQUET LABORDERIE.

Before enumerating and summing up the various methods of treatment which have been proposed for diphtheria the past few years, it seems to me desirable to inquire what are the notions which have guided the different authorities in their choice of remedies. MM. Roux and Gersin have been the first to furnish an experimental proof, clear and irrefragable, of the nature of the diphtheritic poison, and they have imparted considerable light on the pathogeny of this grave affection.

In Roux's estimation, there is no specific yet found, and the phenic acid solutions still remain the most efficient remedial agents, arresting or suppressing better than any other the multiplication and development of Loeffler's microbe. He considers the disease as local at first, then general, and the generalization may be sometimes very rapid, owing to the susceptibility of the patient and the virulence of the microbe. It is not directly by the bacillus that the organism is smitten; the microbe breeds in the crypts of the tonsils, the buccal or pharyngeal folds, and does mischief principally by its toxines, which are absorbed and produce the grave constitutional manifestations. We actually do know that there are substances which we may call *antitoxines* because they neutralize the toxines, and it may well be that in introducing an antitoxine into the organism we render the latter refractory; but it remains for the future investigator to find the antitoxine of diphtheria and to teach us how to apply it.

*A report made to the Therapeutical Society, Paris, France, and read before the meeting, April 13, 1892. Reproduced for the MEDICAL AGE by E.P. Hurd, M.D.

At the same time, attempts have already been made to confer immunity on animals. Behring and Kitasato have published a series of experimental researches on this subject; they have rendered guinea-pigs refractory to diphtheria. This they have done in the following ways:

(1) By inoculating sterilized cultures of the diphtheria bacillus every day for ten to fifteen days. (2) By adding 1 part of trichloride of iodine to 500 parts of these same cultures, and injecting the product. (Immunity in both these cases is due to the products of the secretion of the bacilli. The test-animals which were not inoculated all succumbed to the infection.) (3) The guinea-pigs are equally rendered refractory by the inoculation of the serous or sanguinolent liquid drawn from the pleura of animals dead from diphtheria. (4) Behring has also rendered refractory to diphtheria guinea-pigs already infected by the inoculation of virus by treating them with injections of ICl_3, or of trichloracetic acid or of naphthylamine. The immunity disappears under the influence of inoculations of great quantities of the diphtheritic virus. The trichloride of iodine (ICl_3) does not seem applicable to man.

Babinsky and Grigorovich* have noted, as a result of fortuitous circumstances, that cases of diphtheria have turned out favorably after an attack of erysipelas, and they have even gone so far as to advocate the inoculation of diphtheria patients with the products of erysipelas. Dr. Trewonne has attempted this kind of inoculation in three grave cases, only to meet with failure; his cases seemed to grow worse when the erysipelas set in.

Thus far the theories have been rather barren of good therapeutic results. The tentatives recently made by several physicians, Loeffler in particular, who has vaunted divers

*See their Treatise on Diseases of Children, Nov., 1890.

essences more or less similar to the essence of lemon, are more rational. Roux is quite a partisan of *raclage* (the swabbing off or scrapiug off of false membranes), and we shall see farther on, when we come to speak of the treatment of Gaucher and others, what clinical experience has to say about this seemingly radical mode of treatment.

It has been said that a multitude of remedies advised for a disease bespeaks therapeutic poverty, and it is especially in diphtheria that this remark holds good. At the same time we have learned much the past few years as to the best methods of treating diphtheria, and the mortality of this dread disease has materially lessened. Expectancy has no longer any powerful advocates in this land, or anywhere else.

Doubtless, in all the varied modes of treatment counseled by representative practitioners of to-day, there is a real unity; in fact, the treatments in actual usage may all be summed up in (1) local antisepsis, and (2) general stimulation.

I cannot too much urge upon physicians this simple desideratum: Your antiseptics should be especially chosen for their known microbicide power in the particular disease you are called upon to treat. Phenic acid has been given for fifteen years in typhoid fever; alas! it is now too well known that phenic acid is a culture medium in which the typhoid bacillus will thrive! On the contrary, it is one of the most powerful agents we possess against the Klebs-Lœffler bacillus of diphtheria.

In the present synopsis of modern practice I shall only speak of the different treatments designed to act antiseptically, and which are based on clinical experience, confirmed by the researches of the laboratory. We may divide the therapeutic means in vogue into two great general classes: (1) Those destined to act on the general state; (2) those destined for the local manifestations.

I will not dwell long on those of the first class, which have lost much of the importance once assigned to them. A multitude of medicinal agents have been recommended, but we need concern ourselves only with such stimulants and tonics as are capable of rendering the organism more resistant and more proof against the microbe and its toxines (wines and spirits, meat juice, tea and coffee, coca, kola, and quinine).

The agents of the second class, by far the most important, may be subdivided into two categories: 1. The medicinal means, such as gargles, irrigations, inhalations, sprays, vaporizations, paintings, swabbings, fumigations. 2. The surgical means. Under this latter head I shall pass rapidly in review the new notions and facts which seem to me to have a useful bearing on practice.

What I am seeking to realize in this undertaking is a judicious choice among a great number of treatments. I shall endeavor to separate the chaff from the wheat, *i. e.*, the most rational methods from those that have little foundation in the pathogenic data of which we are in actual possession. This is not an easy thing to do in a few pages, nor would I attempt it, did not my long experience in the Hôpital des Enfants give me some qualifications for this task. I sum up in this report modes of treatment advised by physicians of the present day who have by their opportunities been especially qualified for the study and treatment of diphtheria. I shall arrange the treatments in their alphabetical order, according to the authorities which I shall cite; the results may be regarded as the current French practice in this dire disease.

Abadie.—This authority treats diphtheria from the beginning to the end with lemon juice, which is locally applied quite often night and day. He claims uniform success.

Bleynie.—Every ten minutes, day and night, Bleynie introduces a little piece of ice into the child's mouth. The cold destroys the microbes, or prevents their multiplication. Sevestre speaks well of this method. Mayer, a German physician, has much confidence in the ice treatment of diphtheria; he gives, besides, a drachm daily of chlorate of potash in divided doses. Out of 100 cases he has not had one death. Thomas has employed the same treatment; out of 300 cases, three deaths. For my part, I would advise great caution in the use of chlorate of potash, which sometimes becomes rapidly toxic in small doses. Cozzolino, of Naples, also employs ice, and claims remarkable success.

Bouchut.—My regretted master, Bouchut, used to employ pounded ice, a teaspoonful

every two hours; also douches of cold water or of saponated coal tar (1 : 40 or 1 : 50). [The saponated coal tar is a mixture of coal tar and the alcoholic tincture of quillaya (*Sapindus saponaria*), which contains saponin.

Saponated Coal Tar.

Coal tar, 100 grammes.
Quillaya, 2,400 grammes.
M.

Digest the mixture ten days in a closed flask, kept at 35° to 40° C. It should be frequently shaken. When sufficiently digested, the mixture is filtered, and the resulting product is black and of a characteristic bituminous odor; may be diluted with water *ad lib.*—TRANSLATOR.] He claimed good results from papain, and I may here recall incidents in his practice while I was in his service prior to 1880. He was in the habit of keeping up a constant evaporation in the room of the patient of solutions containing turpentine, tar, thymol, eucalyptus, and carbolic acid. He was one of the first to prescribe antiseptic lotions and antiseptic vapors.

BOUFFÉ.—The essential part of Bouffé's treatment is the administration, night and day, every half-hour, of a teaspoonful or dessertspoonful of the following mixture, which is also to be painted over the affected parts every two hours:

℞ Lemon juice, 30 grammes.
Chloride of sodium, 10 grammes.
Sulphate of soda, 5 to 10 grammes.
Honey, 15 grammes.
Saccharate of lime, 2 to 4 grammes.
Sodic phenol, 20 to 30 drops.
M.

BURLUREAUX.—He practices large buccal and nasal irrigations, night and day, with some weak antiseptic solution. He says that he has attained excellent results from *boiled water alone.* The copious and repeated lavages help detach the false membranes, prevent their development, and carry away the toxines. Perseverance in this treatment is essential to success.

CADET DE GASSICOURT.—The topical remedies which he employs with most success are lemon juice, phenic acid, saccharate of lime, papain, lactic acid, and lime-water. Sometimes he makes use of direct applications, sometimes of irrigations, sometimes of sprays. The lemon juice, saccharate of lime, papain, and phenic acid serve for the direct applications. The phenic acid and coal tar are useful in gargles, in irrigations, and in inhalations. As a modifier of mucous membranes he regards pilocarpine as dangerous and jaborandi as useless; cubebs and copaiba have sometimes seemed to render more easy the elimination of false membranes. He employs also the chlorate of potash, and gives tonic and supporting treatment, with plenty of nourishing drinks. He tries every ruse to make the children take food. He lets his patients sleep.

CALLIAS—LEBLOND. — Touchings, night and day, of diseased parts with a solution of resorcin, 5–10 parts; spraying the throat every two or three hours with a 2-per-cent. solution of resorcin. Tonic and supporting treatment.

COMBY.—Comby employs the camphor-naphthol.

℞ Naphthol, 10 grammes.
Camphor, 20 grammes.
Glycerin, 30 grammes.
M.

This is applied three times a day with energetic friction. Every hour he sprays the throat with a saturated solution of boric acid, or with a two-per-cent. solution of salicylic acid. He also respects the sleep of the patient.

DELTHIL.—The therapeutic agent which he advises to employ should possess the following properties: (1) Pronounced local microbicide action; (2) ready and rapid absorption; (3) ready elimination by the natural emunctories; (4) tolerance, in efficacious doses, of the medicament by the anatomical elements, cells, tissues, and humors. He employs the non-toxic hydro-carbons in inhalations, fumigations, and direct applications; essence of turpentine and its congeners, and coal-tar. He keeps up a constant evaporation in the sick room (which must be closed) of spirits of turpentine, essence of lemon, of lavender, of cajeput, of camphor, etc. It suffices to pour these essences in large quantity (he would use as much as much as two quarts of spirits of turpentine) into large open receptacles; and there must be enough of these open vessels

to give an evaporating surface of at least one square yard for a room of sixteen square yards. The volatilization takes place in free air, or is helped on by a sea bath. On each side of the patient's head, at about eight inches distance, is placed a sponge or towel saturated with spirits of turpentine. The turpentine should be crude, not rectified. The room should be kept at a constant temperature of 65° to 70° F., which hastens the the vaporization and the sudation needed for facilitating the elimination of toxines. As for the local treatment, frequent painting of the throat with the following preparation:

℞ Spts. of turpentine, 40 grammes.
Camphor, } ää 4 grammes.
Essence of cannella, }
Naphthol, 80 cgms.
M.

The following gargle may be used by the older patients:

℞ Essence of turpentine, 30 grammes.
Lemon juice, 200 grammes.
Egg, yolk of 1.
M.

As for the sleep, although Locke has said that sleep is the most excellent cordial nature has prepared for man, Dr. Delthill has a very pronounced opinion on the subject. He says: "It will not do to respect sleep in diphtheria, for during sleep the disease may get the upper hand. The patients must be waked up frequently to have their throats or nasal organs attended to; to respect the sleep is an unpardonable weakness."

DESCROIZELLES.—This physician makes moderate use of topical agents, and only when the false membranes are hard and resistant. Nitrate of silver, solid or liquid, does not merit the discredit into which it has fallen. He believes in abundant and repeated irrigations, preferably of carbolic acid. Nutritive lavamenta, if feeding by mouth is impossible.

DUJARDIN-BEAUMETZ.—He now adopts the method of Gaucher (see below), and is an advocate of energetic treatment. The topical application which gives him the best result is the solution of phenol in sulforicinic acid. He adds ice, to be given at times, and the tonic regimen, of which caffeine, coca, and kola form the basis.

GAUCHER.—There are two fundamental indications: (1) Ablation of the false membranes; (2) antiseptic cauterization of the underlying mucous membrane. Carefully clean the throat by means of a swab of absorbent cotton (or the swab-forceps made for the purpose by Crésantignes); then cauterize with the following *topique:*

℞ Camphor, 20 grammes.
Castor oil, 15 grammes.
Alcohol (at 90°), 10 grammes.
Carbolic acid fort., 5 grammes.
Tartaric acid, 1 gramme.
M.

The proportion of camphor, castor oil, alcohol, has not so much importance as that of the carbolic acid, which may vary according to the case, from 1 to 20 grammes. For the cauterization he makes use of absorbent cotton on a probang. Ten minutes after the cauterization (this time being given the topical agent to act) he practices a large irrigation. This triple operation—(1) Clearing the throat and ablation of false membranes; (2) cauterization; (3) irrigation—is made every two, three, or four hours. Except in very rare cases, the operation is performed but once in the night-time. For the irrigations he uses boiled water in very young children; in older children, a solution of phenic acid, 1 to 2:100.

This is the only treatment of which I can speak from personal experience, having adopted it since 1884 at the beginning of my medical practice, and after a desperate case with commencing croup to which I had called Gaucher.

This patient was a child two years and a half old, who got well in a few days; and since then I have had occasion to apply Gaucher's treatment to a great number of cases. Four of these were young children in my own family, all of them recovered. To this day Gaucher and I reckon a mortality of only 5 per cent. It is said that this mode of treatment is brutal, that it may cause phenic acid poisoning, and that it is difficult in its application to children. The following conclusions formulated by Gaucher in a communication to the Medical Society of the Hospitals in 1888 fully accords with my own constant experience:

(1) This treatment is applicable to children as well as to adults. (2) There has

never been a case of carbolic acid poisoning. (3) All the adults and almost all the children treated have got well save in cases where the treatment was badly applied, or in very young children by reason of croup. (4) The treatment, if applied in time, may preserve from croup, as several observations of Dubousquet testify.

Gaucher and I, in fact, have never lost a patient above five years of age, and this despite the gravity of certain cases. My treatment differs a little from that of Gaucher. I paint the throat more frequently and perhaps less energetically than he. I make more frequent irrigations, every hour, and sometimes every half hour. I do not hesitate to wake the patients every hour, for it results from several observations of different practitioners, from Guelpa's experience and my own, that cases seemingly benign may become grave if you desist from your attention in the night-time. I keep the room of the patient filled with the vapors of tar and of turpentine, which have, I believe, some prophylactic and curative value. The treatment of Gaucher, by the way, has been endorsed by the writers of the Traité de Médicine.

GRANCHER.—Every two hours a large irrigation of the nasal fossæ and pharynx with carbolic water, 2 per 100 in the case of children above 7 years of age, or with boric acid water, 3 per 100 for smaller children. Every two, three, or four hours, according to the extent and reproduction of the false membranes, the throat is swabbed thoroughly (without making it bleed) with sulforicinated phenol. The solutions of this phenol contain ten, twenty, or thirty per cent. of phenic acid, according to the cases. Tonics and abundant alimentation.

GUELPA.—The dominant idea of Guelpa, and the one which distingues his method, is so to direct the treatment as to preserve and augment the resistance of the tissues surrounding the false membrane, instead of concentrating the efforts in the destruction of the false membrane, which is the capital point in almost all the other treatments. He is careful to do no violence.

Very frequent irrigations, night and day, of the region invaded and likely to be invaded. These irrigations fortify the epithelium, hinder the evolution of the pathogenic colonies, and sweep away the toxines. The false membrane falls from the second to the eighth day. His view is justified by the researches of Roux and Gersin, who prove that the diphtheritic poison only produces its dangerous effects when taken into the organism in quantity relatively abundant, which is prevented by the copious and repeated lavages. He keeps the room at a constant temperature of 65° to 70° F. One or two large flat dishes, partly filled with a 5:100 carbolic solution, keep up a constant evaporation in the room. Nares and throat are irrigated every half hour with a tepid solution, a rubber hand-ball syringe holding between three and four ounces to be used for the purpose. The water should be squirted in with sufficient force to flush the false membrane and adjacent parts. He uses a solution of perchloride of iron, 1 to 5:100, or a weak solution of phenic acid.

Guelpa's notions of diphtheria, based on the good results which he has obtained, may be summed up as follows:

(1) Of contagious diseases, diphtheria is one of the best known, and certainly better than any other, by its mode of evolution, and its place of election is amenable to treatment designed to nip it in the bud. (2) Every case of diphtheritic angina not complicated with other infectious affections is followed, almost without exception, with cure in the space of a week, if it is attacked from the very first day, or when the false membrane is clearly circumscribed, without specific tumefaction of the glands. (3) The general mortality may be reduced to an average of 10 per cent., instead of 35 per cent. and more, which are the figures under the old methods of treatment.

D'HEILLY.—Remove the false membranes "*doucement*" (gently). He prefers, as "*topique*," the salicylic acid:

℞ Glycerin, 30 grammes.
Salicylic acid, 1 gramme.

(Or 15 grains of salicylic acid to one ounce of glycerin.)

M.

He employs the formula of Jules Simon, mentioned farther on. Borated lime-water in irrigations—chlorate of potash, cubebs, and copaiba are of no use.

HUTINEL.—He removes, destroys, or sterilizes the false membranes with pledgets of absorbent cotton, or preferably flannel, without causing bleeding. He makes use of Gaucher's liquid, or the sulforicinated phenol. Irrigations of boric water (4 : 100), lime-water, chloral water (2: 100), carbolic water (2: 100). Repeated ablations and cauterizations — every three or four hours. A longer interval during the night, but care must be taken not to interrupt them during the night. He also emphasizes the importance of a tonic and supporting treatment.

LEGROUX.—This physician employs the method of Gaucher and the sulforicinated phenol. He gives creasote internally in rum or glycerin, and speaks well of the continued use of chlorhydric lemonade—4 : 100—in the hope of attenuating the toxines, as the bacillus develops badly in acid media.

LŒFFLER.—Lœffler says that he has found very useful, as a prophylactic means, gargling with a solution of bichloride of mercury, 1 ; 10000, or of cyanide of mercury 1 : 10000, or of chloroform or thymol-water 5 : 100. As vapors for direct inhalation, or to saturate the atmosphere, oil of bitter oranges, of lemons, of eucalyptus, benzuol, anisol, toluol. As topical treatment, gargling every two hours with weak solutions and every four hours with strong solutions. These are: Bichloride of mercury 1 : 10000, phenic acid 1 : 100, alcohol and turpentine equal parts with 2 per 100 of phenic acid. In the intervals paint the throat with a 5 : 100 carbolic solution.

MENGEAUD.—He touches the false membrane every three hours with:

Sulforicinate of soda, 80 grammes.
Salol, 10 grammes.
Creasote, 2 grammes.
M.

Irrigations night and day with a warm solution of boric acid, frequent vaporizations of boric water before the mouth of the patient, atmosphere of the room to be saturated with vapors of thymol or eucalyptus, and spiritus frumenti and milk internally.

OLLIVIER.—The conclusions drawn from the labors of Roux and Gersin should inspire physicians with confidence. Since the affection is local at first, if you succeed in time in applying an appropriate, energetic medicament you can prevent the spread and the morbid accidents. Hence the capital point in treatment is an early diagnosis. When in doubt you should act as if the diagnosis of diphtheria was certain. The formula of Gaucher and the perchloride of iron have given good results. Antiseptic pulverizations in the room. He has essayed carbon sulphide, oxygenated water, borate of soda internally; all these remedies have failed in the grave cases, and have only succeeded in cases that would get well under almost any treatment.

RONDEAU.—Every two hours the throat is brushed with a solution of corrosive sublimate 1:500, with a little tartaric acid (5:1000). He endeavors to detach the false membranes by energetic swabbing, without, however, excoriating the mucosa. After removal of the false membranes, the swab saturated with the antiseptic is passed back and forth several times over the subjacent mucosa. Every two hours the throat is sprayed with a hand-atomizer, a solution of salicylic acid 1 per 100 being employed. The sprayings and the swabbings are alternated, so that at least once every hour, night and day, the throat is medicated in some way. Corrosive sublimate is also given internally, in doses amounting to from 4 to 6 milligrammes per day ($\frac{1}{15}$ to $\frac{1}{10}$ grain). He has in three years treated 102 cases, with 89 recoveries.

LANNÉ.—His hobby is saccharate of lime. [It cannot be shown to have done any great things in diphtheria, but lime-water is a remedy of long standing, reputed to have some solvent action on false membranes.]

SCHENDEL.—The tincture of myrrh—fifteen drops of a ten-per-cent. solution every half hour night and day. Paint the throat with some good antiseptic solution, as phenic acid.

SEVESTRE.—He obtains local antisepsis with Gaucher's liquid, or camphorated naphthol, or sulforicinated phenol. Employs also tincture of iodine, perchloride of iron, salicylic acid in 2:100 solution; application every two or three hours. Every two hours, irrigation with carbolic water (1 per 100), boric water, and salicylic acid. He also trusts much to ice, and to injections of caffeine and of eucalyptol dissolved in liquid vaseline. The injections of eucalyptol are well supported,

and besides doing good by their general effect, they have a topical action, being in part eliminated by the pharynx. Benzoate of soda internally—2 to 3 grammes *per diem.* Tonics and alimentation.

Jules Simon.—The swabbings are made by the aid of two pairs of curved swab-forceps; the one armed with dry absorbent cotton serves for cleaning the throat, the other, also armed with absorbent cotton, is dipped into the topical agent and brushed energetically over the false membranes every hour during the day and every three or four hours during the night. He uses lemon-juice, dilute acetic acid, or the following preparation:

℞ Salicylic acid, 1 gramme.
Infusion of eucalyptus, 60 grammes.
Glycerin, 30 grammes.
Alcohol, 15 grammes.
M.

Where the false membranes are very thick, swabbings three or four times a day with perchloride of iron and glycerin, equal parts. Irrigations of lime-water, boric water, Vichy water. If the child is old enough to gargle, hydrarg. bichloride solution 1:2000. Flat dishes full of tar are allowed slowly to evaporate in the room over an oil lamp. Pulverizations five or six times a day with thymol or tincture of eucalyptus. Boilers constantly in ebullition, and containing eucalyptus leaves. Internally, one or two drops of perchloride of iron every two hours, tea, coffee, milk, liquors.

Soulez (of Romorantin).—He was one of the first to employ phenol. The following is his camphorated phenol:

℞ Acid carbolic fort., 9 grammes.
Camphor, 25 grammes.
Alcohol, 9 grammes.
Olive oil, 35 grammes.
M. For frequent use as a topical application.

The methods of treatment of Francotte, of Liège; of Mackenzie, of Renou; etc., are quite in accord with our modern ideas. Francotte paints and irrigates every half hour with lime-water to which is added caustic soda, and he gives ice.

Mackenzie sprays every two hours with lactic acid, paints with the same substance or a solution of chloral; the sulpho-phenates have done him good service.

Renou relies on vapors of carbolic acid, temperature 68° to 70° F., and over a kerosene stove a large dish containing two quarts of water kept boiling; into this water is poured as often as every two hours a tablespoonful of a solution containing in each tablespoonful:

℞ Acid phenic, 5 grammes.
Acid benzoic, 2 grammes.
Acid salicylic, 1 gramme.

Roulin relies on the carbolic douches.

Sanné makes repeated irrigations with solutions of phenic acid, chloral, or salicylic acid.

Pulawski has made local applications of iodoform with good results.

All kinds of topical agents have been prescribed. Muntz has vaunted creasote; Wilhelm, of Berlin, zinc chloride, 20:100. Some German authorities have even mentioned tobacco joice. Barbosa, Lutz, Bouchard, and others have recommended sulphur to be dabbed on or blown on to the parts. In England, carbolic acid seems to be preferred by the physicians.

In the hospitals of Vienna they employ gargles and solutions of chlorate of potash, lactic acid, corrosive sublimate, permanganate of potash, chloral. They also swab with these substances.

Bamberger prescribes gargles with:

℞ Hydrogen peroxide, 2 grammes.
Distilled water, 100 grammes.
Syrup aurantii cort, 20 grammes.
M.

And paints with:

℞ Hydrogen peroxide, 2 grammes.
Distilled water, 20 grammes.

With quinine for the fever.

Monte makes use of ice, paints with phenic acid, blows sulphur in the throat, or iodoform in fine powder.

Schrœtter paints every two hours or every hour with:

℞ Hydrochloric acid, 5 grammes.
Water, 50 grammes.
M.

Bits of ice for keeping in mouth or swallowing, inhalation of phenic acid, and evaporation of turpentine.

In Switzerland the method of Delthil (see above) is much in vogue.

Note.—The sulforicinate of soda, of which mention is several times made above, is a liquid of consistence of thick syrup, with rather insipid odor and taste, somewhat resembling castor oil. It is made as follows. Into a large cylindrical glass vessel furnished with a stop-cock at its lower part, and containing one kilogramme of cold drawn castor oil, pour 250 grammes of pure sulphuric acid in little quantities at a time, keeping the mixture constantly stirred with a glass rod. Leave the substances in contact about ten hours. Then add cold water; draw off the aqueous stratum, then wash several times with a strong solution of salt and water. After each washing, the mixture must be allowed to settle a while. Then neutralize in part, so as to preserve a feebly acid reaction, with soda, which is added cautiously and with constant agitation, in order to obtain a homogeneous mixture. (Care must be taken not to add an excess of soda, for then the mass would be spoiled.) The mixture is then allowed to rest for two days, then it is decanted and filtered through coarse paper. The product is then dehydrated, being agitated with a little pure, dry carbonate of potassium, and filtered again. It ought then to be of a deep yellow color and perfectly transparent.

This excipient forms with water an emulsion of extreme fineness, so that when it is put in contact with a moist surface the latter is covered intimately with an adherent white coat. Moreover, it enables us to dissolve carbolic acid in very high proportion (even to 40 per cent.), without rendering the solution caustic, or weakening its antiseptic power. Solutions of 20 to 30 per cent. are generally employed. They are prepared by adding 20 to 30 grammes of strong phenic acid to 70 or 80 of sulforicinate of soda prepared as above.

EXPERT TESTIMONY IN CASES OF INSANITY.

BY CHARLES H. MERZ, A. M., M. D.

The witnesses that are permitted to give opinions upon questions of fact that come before judges or juries for decision, which questions cannot be intelligently decided because they are beyond the ordinary knowledge of such judges or juries, are denominated "experts." While much has been written regarding such witnesses and their qualifications, we may in all submissiveness ask: Who is an expert?

This practice of admitting the evidence of witnesses who have become qualified by study and experience to express opinions upon questions of science and art is by no means peculiar to modern times. By the Roman law persons who were "*artis periti*" could be summoned by the *judex* in order to inform him as to physical laws or phenomena. And the celebrated criminal code framed by the Emperor Charles V, in 1532, contained a formal enactment requiring the opinion of medical experts to be taken in all cases where death was supposed to have been occasioned by violent means. In 1606 Henry IV, of France, conferred a similar duty upon his first physician. In 1692 it was ordained that physicians should be associated with the Council of State, and one of the early English records shows that in a certain case involving some medical point, upon the court not knowing how to decide, medical testimony was introduced and admitted. In 1553 Mr. Justice Saunders is reported as saying: "If matters arise in our law which concern other sciences or faculties, we commonly apply for the aid of that science or faculty which it concerns, which is an honorable and commendable thing in our law, for thereby it appears that we don't despise all other sciences but our own, but that we approve of them, and encourage them as things worthy of commendation." Instances are also recorded in the Year Books where the Courts received the opinions of witnesses learned in the sciences and the arts. But this little review leads us back to our first question—Who is an expert?

If, in our search for information, we turn to Messrs. Wharton and Stillé, we find that the expert must be skilled in three departments of science, as follows: (1) Law sufficient to determine what is the responsibility which is to be the object of the contested capacity; (2) psychology sufficient to be able to speak analytically as to the properties of the human mind; (3) Medicine so far as concerns the treatment of the disease sufficient to be able to speak inductively on the same subject.

Perhaps it would be difficult to find a more perfect classification of the necessary qualifications than that just given. Justice Maule says: "All persons who practice a business or profession which requires them to possess a certain knowledge of the matter in hand are experts so far as expertness is required." And his definition has been adopted in Virginia. In New Hampshire we find Mr. Justice Doe declaring: "An expert must

have made the subject upon which he gives his opinion a matter of particular study, practice, or observation, and he must have particular special knowledge on the subject." The court of Rhodé Island says through Chief Justice Ames: "Knowledge of any kind, gained for and in the course of one's business as pertaining thereto, is precisely that which entitles one to be considered an expert, so as to render his opinion, founded on such knowledge, admissible in evidence."

Again, Mr. Justice Royce, of Vermont, states: "An expert is defined to be a person that possesses peculiar skill and knowledge upon the subject matter that he is required to give an opinion upon." As briefly defined by Mr. Chief Justice Shaw, of Massachusetts, "an expert is a person of large experience in any particular department of art, business, or science." Justice Redfield says in his edition of Greenleaf's Evidence: "The term expert seems to imply both superior knowledge and practical experience in the art or profession, but generally nothing more is required to entitle one to give testimony as an expert than that he has been educated in the particular art or profession"—for persons are presumed to understand questions relating to their own profession or business. As the experts' opinions may rest either on their personal knowledge or on facts testified to by other witnesses, it is an error to assume that an expert is one who simply testifies from premises furnished by the testimony of other witnesses. In a matter of science no individual can be considered an expert who does not thoroughly understand the sciences involved.

In the law there is no restriction as to schools or degree of education in the acceptance of experts. Any man possessing the title of M.D. is legally qualified to pronounce an opinion upon the merits of any case brought to his attention. To this fact is due much of the present irregularity in accepting as expert testimony that which should be condemned as absolutely worthless. Is there any less reason for demanding of a physician, in cases of insanity, a certain degree of skill and experience in that particular department of inquiry than there is expected in making a qualitative analysis of the contents of the stomach for poison in a case of suspected murder? Yet what ordinary physician—a graduate from a reputable college, in which chemistry, materia medica, and toxicology are all taught—would undertake such an analysis? It would undoubtedly be referred to an expert in that especial department of science. Yet that same man would unhesitatingly take the witness stand and swear to an opinion involving as much or even more responsibility. It is an egregious farce that men should go upon the witness stand and pose as experts who have not the first qualifications essential to such a position. And this is accepted by the Courts and the people without a murmur, and the lawyers are helping to bring forward a wretched superabundance of such testimony, by calling two, four, or perhaps six physicians upon opposite sides, and then making them swear at themselves and the truth until, like the Kilkenny cats, there is nothing left. The evidence given is a hopeless, worthless jumble. I do not accuse the profession of infidelity, but I do claim that the temptation to compromise professional dignity becomes very great, and that too often an able, modest, and self-respecting physician allows himself to be led into a department of his science where lack of practice makes the finer discriminations and recognition of obscure affections an unfair test of his abilities as a scientific physician. It is a public misfortune that the legal profession is so short-sighted as to allow and encourage expert testifying to become a business among those not qualified to take such a position. The degradation will be an irreparable one, and the poor cat's paw will be maliciously and painfully scorched in pulling from the fire chestnuts of his avaricious, but cunning and superlatively impudent debtor.

Somewhere I have read that dear old John Phœnix complained that our use of adjectives is entirely too vague. If a man were called good, he wanted to know exactly how good you thought him. If "Sally who lives in our alley" could be called beautiful, is that the adjective that should be applied to Helen of Troy? John therefore proposed to prefix a number to each adjective that should indicate just the degree of perfection desired. If in your calm and dispassionate opinion Sally is as beautiful as Helen, you

would call her 100 beautiful, though perhaps your friends might think her only 25 beautiful. If we were to apply this principle to medical experts, we should find them numbered in a rather humiliating but most satisfactory manner.

Cases occurring daily in our courts show conclusively that the law and courts recognize a man as competent to give expert testimony who may have qualified himself by the practice of medicine without any particular study, or by the study of medicine with little or no practice. While this is true, it is not admitted that a person may qualify himself to testify as an expert in any particular case merely by devoting himself to the study of authorities for such a case, when such study is not in the line of his particular department but is studied for the purpose of enabling him to testify in the case. A physician may state his knowledge of a special subject in medical science, though he may not have derived his knowledge from experience or actual practice, but from what he has learned from study or perusal of medical authors. Here is another source of error and uncertainty. No man is a true electrical expert from studying the *opinions* of others on the subject. He must know the details of electrical and mechanical construction and the operation of machinery when actuated by that subtle fluid. The mere knowledge of construction is not sufficient. There must be experience from actual operation.

Judges and lawyers are to blame for this state of affairs. A judge is entitled to decide the presence or absence of the qualifications necessary in an expert, and he is not justified in accepting such an one until so satisfied. He is entitled to examine the would-be expert in regard to his knowledge in general and particular.

The Court should exercise judicial discretion in regard to accepting evidence purporting to be that of experts. The expert is called upon to act in the capacity of an adviser of the Court, and not, as is frequently the case, to testify on behalf of the side that summons him. Taking this view of the question, how much greater the necessity for an opinion based upon extensive study and experience! The judge and jury will have no difficulty in reaching a conclusion in the case of the raving maniac or the driveling idiot, and possibly none with the individual that is a "little off his base," but between these degrees are hundreds of varying shades and conditions that can be successfully diagnosed and detected only by the man whose training, research, and observation have made him familiar with them.

There are causes which in acting interfere with self-government and act morally—faults and crimes which society not only encourages but later punishes—and they constitute the ethico-legal considerations of the same act, but do not come within the decision of the physician, unless connected with a perverted or defective mental condition. In admitting the physician's competency to decide on these points, we shall find that there is as wide a range of opinion respecting each case as there may be difference in the sentiments of medical men. Society is jealous of her rights, and she is justified in trying to prevent any one or any number of professional men from assuming an authority in reference to matters affecting her interests, those matters being within her own control. All of these considerations are of the greatest interest and far-reaching value, so far as concerns the detection and punishment of crime and insanity. When the individual that is to be proved mentally incompetent or criminal stands before you, the question should not be put in the hands of any ordinary practitioner whose assumption of power to explore the hidden recesses of the mind and to decide how far sanity has disappeared or individuality been weakened makes his testimony in many cases a stupendous absurdity. There is little ground for the belief that general knowledge can compensate for special knowledge.

If compelled to testify when he considers himself unqualified, let the physician clear his skirts of the suspicion of deceit or dishonesty by stating clearly and in the beginning that he is *not an expert* and must not be so considered. Even to the qualified expert some cases are inexplicable, and an ordinary physician but betrays profound ignorance in essaying to diagnose them. There is far too much laxity in this matter of calling upon the unqualified physician to testify as an expert—or, better, as an inexpert. It is often

no less than prostituting the names of medicine and science to cover some scoundrel with the cloak of insanity. Too often the verdict is that of the Welsh jury: "Not guilty, but we recommend him not to do it again."

There are men whom we may well deem experts. They are medical superintendents and their assistants in hospitals for the insane, and, excepting in those instances where politics has prevailed over personal qualifications, they are gentlemen of high culture, mature judgment, and eminent for their medical knowledge and scientific attainments. Possessing all these qualifications and advantages, they have devoted their whole time to the study of every form of insanity, and are therefore experts in a true sense of the word, and fulfill the qualifications demanded by Messrs. Wharton and Stillé, mentioned at the beginning of this paper. The subtleties and intricacies of the diagnosis of experts remind one of the reply of the cannibal chief, when asked what had become of the missionaries: "Alas, they gave us *so much good* advice, we *had* to put them to death mercifully." Even the most learned of experts are found to disagree, possibly because each party chooses only those experts whose testimony will be of value to them. In most cases where expert testimony will be of any especial value, from one to six experts are called on each side, and often the physician acts as the medical expert and the medical adviser at the same time.

One or two quotations may not be amiss as showing the difference of opinion among prominent authorities as to the value of expert testimony. After all there is a great deal of uncertainty as regards such testimony.

Doe, J. (State *v.* Pike, 49, N. H. 299), said: "The legal profession, in profound ignorance of mental disease, have assailed the superintendents of asylums, who knew all that was known on the subject, and to whom the world owes an incalculable debt, as visionary theorists and sentimental philosophers, attempting to overturn settled principles of law; whereas, in fact, the legal profession were invading the province of medicine and attempting to install old exploded medical theories in the place of facts established in the progress of scientific knowledge."

In Regina *v.* Leander (Cent. Crim. Court, June, 1864), Bramwell, B., said that, although medical men were often heard in courts of justice to define insanity, he thought ordinary men of the world were just as well qualified to form an opinion on these matters as they were.

Davis, J., of the Supreme Court of Maine, went so far as to say: "If there is any kind of testimony that is not only of no value, but even worse than that, it is, in my judgment, that of medical experts. They may be able to state the diagnosis of a disease more learnedly, but upon the question whether it had, at a given time, reached such a stage that the subject of it was incapable of making a contract, or irresponsible for his acts, the opinions of his neighbors, if men of good common sense, would be worth more than those of all the experts of the country."

Ladd, J., in State *v.* Jones, in 1871, said: "I may add that it confirms me in the belief that we are right, or at least have taken a step in the right direction, to know that the view embodied in this charge meets the approval of men who, from great experience in the treatment of the insane, as well as careful and long study of the phenomena of mental disease, are infinitely better qualified to judge in the matter than any court or lawyer can be."

In the Commonwealth *v.* Rogers, in 1844, Shaw, C. J., said: "The opinion of professional men on a question of this description is competent evidence, and in many cases is entitled to great consideration and respect. The rule of law on which this proof of the opinion of witnesses is founded is not peculiar to medical testimony, but is a general rule applicable to all cases where the question is one depending on skill and science in any particular department. In general, it is the opinion of the jury which is to govern, and it is to be formed upon the proof of facts laid before them. But some questions lie beyond the scope of the observation and experience of men in general, but are quite within the observation and experience of those whose peculiar pursuits and profession have brought that class of facts frequently and habitually under their consideration. A familiar instance of the application of this principle occurs very often in cases of homi-

cide, when, upon certain facts being testified to by other witnesses, medical persons are asked whether, in their opinions, a particular wound described would be an adequate cause, or whether such wound was, in their opinion, the actual cause of death in the particular case. Such question is commonly asked without objection, and the judicial proof of the fact of the killing often depends wholly or mainly upon such testing of opinion. It is upon this ground that the opinions of witnesses who have long been conversant with insanity in its various forms, and who have had the care and superintendence of insane persons, are received as competent evidence, even though they have not had the opportunity to examine the particular patient and observe the symptoms and indications of disease at the time of its supposed existence. It is designed to aid the judgment of the jury in regard to the influence and effects of certain facts which lie out of the observation and experience of persons in general. And such opinions, when they come from persons of great experience, and in whose correctness and sobriety of judgment just confidence may be had, are of great weight, and deserve the respectful consideration of the jury."

Such contradictions as these just quoted are painfully frequent and mortifying, and in his endeavor to elevate the standing of the average physician in courts of justice and before juries it is well for the physician to bear in mind, if compelled to give testimony—so-styled expert—that hypothetical cases, as prepared by lawyers, are very often worthless. They are prepared by lawyers who have time and skill and who are well paid. The least that can be said is that these questions are misleading. Many important symptoms are omitted, while often trifling ones are inserted, and the questions are subtle and intricate. Again, an expert is summoned most frequently, not on account of *personal*, but on account of *technical* knowledge, and hence he is not called as an ordinary witness. Nevertheless your opinion is your own, whether you are upon the witness-stand or in your own consultation room, and you can give or withhold it as you choose. When you are asked upon examination-in-chief for an opinion, you are entitled to a just and proper fee for that opinion. The professional knowledge of an attorney or a physician is to be regarded as personal property, and is not at the mercy of the public. If summoned against your will to testify on assumed facts, you have a right to ignore the subpœna, and it is doubtful if you can be punished for contempt. To ask you to attend court and hear testimony, so as to be able to express an opinion, is as unjust as wrong, and you can refuse until you are assured of pay for the loss of time. The compensation, however, must be settled upon in advance. To testify in chief and refuse cross-examination before being paid is not sustained. The compensation for testifying is shamefully inadequate and out of proportion in the majority of cases. In every case it should be determined upon by the judge or Court, and ordered paid by one side or the other.

The loss of time incident to attendance upon trial, even in one's own county, is absolute. Hours are given up to the State or individuals, for a compensation the proffer of which in a private case would be refused as an insult. To better this present state of affairs and protect the interests of the physician when called upon for expert testimony, it has been suggested that three experts be appointed for each case—one by the counsel for the defense, one by the counsel for the prosecution, and one by the judge—and that these three be paid by the two sides as directed by the Court. Depositions could be submitted to these three in writing. This would avoid the unpleasant and tedious delay of the attendance upon court, personal antagonism between counsel and expert, and would procure opinions as nearly as possible free from bias.

It is not the purpose or desire of the writer to devise a plan for remedying these evils, believing this had better be left to the judgment of the Court and the legislators themselves, but it is his earnest desire to appeal for the establishment of a standard to which men summoned as experts must conform, or qualifications which they must possess before they shall, at the demand of attorneys, be involved in distasteful and annoying cases.

To this I would modestly add the gentle reminder that the laborer is always worthy

of his hire. In a simple commercial sense I would ask if compensation would not be far better and more in proportion with the value received were there not so many individuals in the profession who, while clinging desperately to the coat-tails of medicine and respectability, are yet ready to rush into court and unburden their intellects merely at the request of or for the recognition of some attorney, or under the delusion that such a course will bring professional success.

NOTES ON THE APPENDIX VERMIFORMIS: ANATOMICAL AND CLINICAL.

BY GEORGE DOCK, M.D.

No explanation is necessary for the selection of the subject I bring before you. Its importance may be seen by a perusal of current medical literature, in the number of articles and society reports bearing on it.

Some apology may be due you for the form in which the matter is presented. I advance no theories and bring out no conclusions. But this is rendered necessary by the nature of the subject. The typical cases of appendix disease are well known to all, promptly diagnosed, and treated for the most part rationally. But we are becoming familiar with the fact that in a considerable proportion of cases of appendix disease the symptoms are vague, and that, owing to this, lives are lost even to the most progressive. With the increase in knowledge these cases are becoming rarer, but are common enough for all who have opportunities for making autopsies to see examples all too frequently.

For some years I have endeavored to gain some light by a study of the anatomical relations of the appendix. Although the number of examinations reported is small, it must be remembered that some of the most useful studies of the appendix have been made on small groups of cases. One reason for reporting the observations at this time is that opportunities for carrying on the observations are wanting. In the course of the observations I met with a number of cases presenting interesting clinical points. These I shall mention briefly. I pass over a number of cases of disease of the appendix or its vicinity, treated as such, either internally or by surgical means, and in which, by their course or the result of operation, one or other of the common forms of appendix disease was made out.

Most of the observations were made in Galveston, Texas, in hospital and private practice. The number of bodies examined was 80. A large majority were beyond the age at which appendix disease usually develops. Seven were below the age of 21—*i. e.*, two of 3 years, one each of 5, 14, 16, 18, 20—between 21 and 25, five; 26 to 30, nine; 31 to 35, seven; 36 to 40, nine; 41 to 45, ten; 46 to 50, ten; 51 to 56, five; 56 to 60, nine; 61 to 65, three; 66 to 70, one; 71 to 75, four; very old, age unknown, one. Sixty-five were white, fourteen negro, one Mexican. There were seventy males and ten females. The peculiar conditions as to age and sex are common in hospitals in the South.

The position of the appendix was carefully noted before any of the organs were moved. In forty-seven cases it was in that called normal—lying among the folds of the small intestines, or behind the mesentery, and pointing towards the position of the spleen. In eight cases it lay in the right iliac fossa. In eight cases it lay near this position, noted as in the vicinity of the right sacro-iliac articulation, or the lumbo-sacral articulation. In four cases it lay to the left of the ascending colon and running up towards the liver; in four to the right of and close to the ascending colon. In six cases it was quite in the true pelvis; in one of these, in a case of chronic dysentery, the cæcum was adherent in the pelvis. In one case the appendix ran horizontally back from a cæcum rather turned towards the exterior abdominal wall. In one the appendix, four inches long, ran to the left straight across from the cæcum, ending among the coils of small intestines. In one it ran along the iliac vessels to the right pubic spine.

The length of the organ was not noted in every case, but always where longer or shorter than a medium of 3 to 4 inches. In two cases it measured only 1 inch; one in a white male of 30, the other in a white male of 51. The largest measured 7 inches, in a white male of 35. The average length in negroes is probably slightly greater than in whites—4 inches in my cases, but great variations were not so common.

The diameter showed no great variation from an average of 5 mm. In a case of tuberculous ulceration of the intestines, with tuberculous ulcers in the appendix, that organ had a diameter of 15 cm.

PATHOLOGICAL CONDITIONS.

No attempt was made to look for microscopical changes in the absence of manifest lesions, although an experience recorded in a case operated on by Dr. Hadra (Medical Record, Vol. I, 1890, p. 269) makes it probable that such changes could often be found.

In five cases there was evidence of disease in the form of adhesions of the peritoneum of the appendix to adjacent structures, without greater lesions.

CASE 1.—Man of 25 years, died of typhoid fever. Appendix in the right iliac fossa adherent to the cæcum for 3 inches, 1 inch free. It contained no Peyer's patches; the lymph nodules were swollen, but not ulcerated. There was no evidence of disease in the cæcum. The adhesions were firm and smooth, apparently old.

CASE 2 should not, probably, be included. The subject was a man dead of phthisis, with lesions of the ilium and small (tuberculous) ulcers in the mucous membrane of the appendix. The appendix, the size of the little finger, was closely adherent to the left side of the colon. There was beginning inflammation over some of the ulcers in the appendix, but the adhesions were evidently of long duration.

CASE 3.—Croupous pneumonia in a man of 60 years. Appendix 6 inches long, adherent in its whole length to the peritoneum to the left of the ascending colon. There was no other evidence of appendix, or cæcal disease.

CASE 4.—In the body of a negro of about 50, dead of chronic nephritis (contracted kidney, hypertrophy of left ventricle, and atheroma), the appendix, 5 inches long, was closely adherent to the peritoneum, along the right side of the ascending colon, attached by thin but firm adhesions. The obscurity was increased by the opacity of the peritoneum (ascites).

CASE 5.—Man of 63, dead of pyæmia, following extensive crushing, the appendix, 5 inches long, lay close to the right side of the ascending colon, attached by thin but firm adhesions. No other peritoneal lesion.

In a case of typhoid fever, fatal in the third week, there was extensive redness and swelling of the serosa of the appendix, along with swelling of mucous membrane and solitary nodules.

FOREIGN BODIES.

In no case was a true foreign body found; that is, one of external origin.

In one case, a man of 23, dead of pernicious malarial fever, without history of other disease, a fæcal concretion was found. The appendix, 4 inches long and as thick as a lead pencil, ran across toward the promontory, lying among loops of small intestines. About an inch from the tip, in a small dilatation, lay a hard, smooth mass, the size and shape of a prune-stone, for which it was taken until cut out. It was made up of dry fæcal matter, with a thin, moist, pale-yellow coating, and a hard center, resembling a grain of sand.

In one case a mucous plug was found. This was in the body of a negro woman of about 20 years. The patient died suddenly soon after admission to the hospital. There was general anasarca. The only history obtainable was that the patient had been in the same condition for some months. The cause of death was contracted kidney of severe degree.

The appendix was three inches long, lying curled below the cæcum. The intestines showed no lesion. The appendix was filled by a mass of greenish-yellow, tough, gum-like material, resembling to the naked eye and microscopically some kinds of casts passed in membranous enteritis. It was so closely impacted that a probe could not be passed through between the mass and the mucous membrane. In the beginning of the appendix the mucous membrane showed no naked-eye change. Towards the tip it was dense and white.

Sections showed: Thickening of the peritoneum of the appendix and its mesentery, with fibroid thickening of the mesenteric arteries (adventitia). The muscularis was but little altered, the sub-mucous coat fibroid,

and closely united with the fibroid muscularis mucosæ. The tubules of the mucous membrane were not more than half the usual depth, and separated by wide spaces filled with small-celled or fibrous granulation tissue. The epithelial cells appeared mostly as goblet cells. The mass filling the lumen of the appendix was continuous with the colloid contents of the tubules. The process was more marked at the distal end.

Here the plug of altered mucous was precisely like the harder "casts" passed in cases of membranous enteritis. It might be supposed that the plug was the cause of the disease in the appendix. It is more likely, however, that the latter represented the later stages of a severe appendicitis, and that the mucous remaining in the lumen, on account of the rigidity of the walls, became altered in its consistency and appearance. The appendix was probably no longer dangerous, but we can hardly doubt its possessor had passed through a dangerous condition at some former period.

OCCLUSION OF APPENDIX.

This was found in the body of a man of 72, dying of phthisis of many years' duration. The patient had been under the care of Dr. Breakey for a long time, more recently under that of Dr. Wessinger. No history of appendix disease was known.

The appendix was two inches long, hanging down into the pelvis. The proximal half was converted into an impervious cord not quite one-eighth inch thick. The distal end was slightly thicker, but not dilated; the coats fibrous-looking.

This shows eight cases, or 10 per centum of appendices, with marked evidences of disease, or abnormal contents. It would be much more valuable if we could know the histories of the cases, and it is to be hoped that in future a more careful search for the remains of disease in those who recover from appendicitis will be made.

These cases may be used in statistics in connection with others, and it is hoped their publication will serve a purpose.

The following cases are reported as additions to the natural history of appendix disease:

RECURRING APPENDIX DISEASE MISTAKEN FOR OSTEO-SARCOMA.

Correct diagnosis at second attack; operation; recovery; death three months later from obstruction of intestines.

The patient, J. S., æt. 40, came under my care in September, 1890, while temporarily in charge of the surgical wards of a colleague. The patient was admitted for retention of urine, to which he was subject as the result of old stricture of urethra. On rectal examination the prostate was found enlarged, especially on the right side. The stricture was not very tight. Under the use of alkalies, with catheterization, the symptoms were soon relieved. About this time a swelling appeared in the right inguinal region. It was first discovered deep down, just beneath the middle of Poupart's ligament, being found during catheterization, though there was no evidence of it by the rectum. Gradually the swelling became more superficial, and finally redness of the skin and slight softening appeared.

There were no constitutional symptoms, other than those, already much milder, which accompanied the retention. The patient said he had had a similar attack a year before and recovered spontaneously. As the swelling had no connection with the prostate, I concluded it must be of appendicular origin. At that time my colleague returned, and as soon as he saw the patient said he remembered him well, and that he had a sarcoma of the pelvis. On expressing my surprise, he showed the case book, by which it appeared that a year before the man had been admitted in a similar condition. A consultation was then held, the man examined under chloroform, a diagnosis of osteo-sarcoma made, and the patient discharged, an operation being considered inadvisable. The swelling soon disappeared, leaving no trace the patient could discover.

An examination soon made it clear to my colleague that the mass we had then to deal with contained fluid. Under chloroform an incision was made parallel to and just above Poupart's ligament, and a large quantity of fæcal-stinking pus and tissue debris evacuated. The cavity was separated from that of the abdomen by a firm wall, apparently

more than half an inch thick. The whole cavity was lined by granulation tissue. There was no fæcal matter in the pus, and though the suspicion of appendix disease was greatly strengthened, it was considered better not to explore for it at that time.

The cavity was washed out and packed, and in a few days healed up and the man was discharged.

Three months later, December 26, 1890, the patient was admitted, late at night, to the Sealy Hospital. The patient was almost in collapse, with evidences of peritonitis and history pointing to obstruction of the intestines for four days. Dr. Hadra made abdominal section and found general peritonitis, with a small quantity of pus in the recto-vesical space and pus and fibrin flakes between the coils of intestines. The cause of the obstruction was a long tense omental band, adherent to the anterior abdominal wall, low down on the right side, with a number of loops of small intestine tightly caught and turned sharply over it. There were several adhesions between loops of intestines. The band was cut off short and ligated, the adhesions loosened, and the abdominal cavity thoroughly flushed out with hot water. The appendix was looked for but could not be found. The abdomen was closed. No one at the operation knew the patient's previous history, and the patient himself was unable to give it. Four hours after the operation the patient died.

Next morning I was called in to make an autopsy, and at once recognized the man. The scar of the old operation was quite narrow and pale. The peritoneum showed traces of severe inflammation everywhere. Four feet of the ileum just above the valve were almost black, swollen, the mucous membrane thick and gelatinous. The cæcum was in the usual position, but fastened down to the end by firm adhesions so smooth that it seemed as if the cæcum was not entirely surrounded by peritoneum. The appendix could not be found at first, but on raising up the cæcum and breaking the new-formed covering, it was found lying close to the iliac vessels and ending at the right pubic spine, to the connective tissue behind which it was adherent and could be separated with difficulty. The whole appendix was covered with a layer so smooth as to make it seem as though the organ was behind the peritoneum. This was the more confusing from the general peritonitis which masked the opacity of the investment. The walls of the appendix were thick and rigid. The tip was curled downwards for half an inch beyond the adhesion to the pubis, and at the extreme end was a fine opening, through which a thin whitish fluid could be pressed. The opening was beneath the peritoneum and led into a fine sinus, which could be traced down to the bottom of the pelvis. The peritoneum on the lower pelvic wall, from the crest of the pubis to the bottom, was thick and closely adherent to the dense cicatricial connective tissue which indicated the site of the abscess opened three months before. The bladder was adherent to the pelvic peritoneum on the right side, and to the rectum by old adhesions. The prostate was examined to see if the abscess had any connection with it, with negative results. It showed cicatricial remains in both lateral lobes, especially the right. There was a stricture of large calibre in the middle of the penile part of the urethra and another in the membranous part.

The appendix was empty, save a small quantity of thin, whitish fluid. Its walls presented an appearance much resembling that in the case of mucous plug, indicating inflammation affecting all the coats. The other organs in the body presented no changes bearing on the case.

It seems to me a peculiarly instructive case of recurring appendicitis. The fatal end was of course an indirect one, from the adherent omentum, yet it cannot be doubted that the patient was constantly threatened with general peritonitis originating from the appendix. An operation in a period of quiescence, with the removal of the appendix and search for and removal of omental adhesions, which should always be suspected, might have entirely prevented further trouble.

The next case was one with more familiar features, but presents interesting diagnostic and therapeutic aspects. It began as a case of catarrhal enteritis, with mucous and slightly bloody stools, following the eating of a large quantity of grapes. Under treatment this improved, but became worse again,

and vomiting began. Soon after this I first saw the patient. She had vomited everything swallowed for some hours, iced champagne included. The patient moved freely about the bed; the mind was clear and cheerful; face slightly flushed; temperature 101°. The patient complained only of vomiting, and pain in the left side under the false ribs. The abdomen was soft, not distended. Pressure was well borne everywhere except just over the position of the lower end of the spleen, and in the epigastrium; there was no increased resistance at this point. The tongue was red, the papillæ enlarged. There had been no stool for about twelve hours.

Appendicitis had been suspected from the beginning, but there seemed not sufficient evidence of it. The vomiting impressed me as that of peritonitis. Small doses of calomel were given. The vomiting ceased, and the patient slept well. In the following morning the vomiting began again, the temperature rose to 102.8°, higher than it had been at any time before. About noon the patient complained of sudden pain below the umbilicus, the temperature fell, the extremities became cool, and the patient went rapidly into collapse, with delirium, and died three hours later.

At the autopsy was found general peritonitis, with about half a pint of thin, whitish pus and fibrin flakes between the coils of intestine. The appendix lay along the brim of the pelvis, its serous covering red and with a patch of firm fibrin over the distal end. The cæcum was normal. About a foot above the valve the adjacent surfaces of a loop of ileum were found adherent. On separating this a necrotic area, almost black, about the size of a dime, was found. The colon just below the splenic flexure showed a similar spot, corresponding to another on the surface of the small intestine lying in contact with it. In these places, as in the rest of the small and large intestines, the mucous membrane was intact. Examining the appendix from the outside, without removing the fibrin flake, one would not suspect serious lesion. The orifice was patulous. On cutting the appendix open, a small, transverse, whitish slough in the mucous membrane was found near the end, and in the bottom of the slough, covered on the outside by the fibrin, though not tightly, was a perforation the size of a small pin's head.

Without an autopsy it might have been supposed that this was a case of peritonitis due to infection through a diseased, but not perforated, gut wall. That the perforation in the appendix was the point of exit can, however, not be doubted, and though remarkable for the absence of some of the commonest symptoms of appendicitis, the case is not unique. I am quite certain that in another case, almost precisely like the one described, the conditions were the same, but neither operation nor autopsy could be obtained, so that the supposition could not be confirmed.

Cases of this kind, with sudden alarming symptoms, raise the question whether it is not our duty to operate. Without this the issue is hopeless, and although in most cases by the time an operation could be made the collapse is so great as to make all efforts futile, there is reason to believe that operations by experienced surgeons would occasionally save life.

PERITONITIS FROM LIGATION OF THE APPENDIX.

The common practice of ligating the appendix has always seemed to me wrong in theory, and an observation not included among the first eighty cases hardens me in that belief.

The idea seems to be that when the appendix is ligated, and the end beyond the ligature cauterized or otherwise sterilized, the stump will cicatrize, and the end either come away and be absorbed or its nutrition will be kept up by new-formed vessels from the proximal part. No doubt, if the mucous membrane were separated perfectly, as the inner coats of the artery were supposed to be in ligation, or if the adjacent mucous surfaces ulcerated and became adherent, this mode of healing might take place. But it seems to me that there is considerable doubt in any given case whether such a result will occur. If the perfect occlusion did not take place, we would have the risk of infectious material passing out into the peritoneum. When I have mentioned these misgivings to surgeons I have been pointed to the common

practice in treating the stump in ovariotomies, even when the tubes are ligated. But the tubes seldom contain such numbers of virulent micro-organisms as the intestine does.

The case in point was one in which laparotomy was done for ovarian tumor. The appendix was closely adherent to the growth, was torn in loosening it, and was ligated after thorough sterilization of the end. The woman did well for nearly a week, and then died a few minutes after the occurrence of pain in the heart region and left shoulder, with feeling of suffocation. The cause of this was found on autopsy to be a recent thrombus in the right coronary artery, due to extensive atheroma. (It was afterwards learned that the woman had had similar anginose attacks, at long intervals. There was no evidence of heart lesion before death.)

The laparotomy wound and the seat of the operation were in perfect condition, with healing far advanced. The stump of the appendix was in contact with the lower part of the rectum. Around it was about 1 c. c. of yellow pus, which was removed and covers made at once for staining. The ligature (catgut) had ulcerated into the mucous membrane for about 4 mm. There was no attempt at covering over the ligature by exudation from the serosa. The pus contained large numbers of bacteria, including four kinds of bacilli, one of which was probably the common colon bacillus. At any rate the variety of forms makes it certain that the organisms came from the intestine and were not introduced at the operation.

Owing to the accidental death, the infection was of no consequence. Had the patient lived longer she would have had general peritonitis most probably (there were no limiting adhesions), or, at best, circumscribed suppuration, with rupture into the rectum, and the suspicion of infection at the operation.

VENTRICULAR STRAIN.*

BY DR. SAMUEL BELL.†

I wish to draw the attention of the members of this section of the Society to a condition of the heart which occurs during the course of many organic diseases of parenchymatous organs in different parts of the human economy, as well as in the heart itself. "Heart-failure" is a very familiar term, and is often given as the cause of death when the real cause is unknown or still under consideration. The organic lesions most frequently found after death are: (1) A diseased condition of the coronary arteries; (2) a fatty or fibroid degeneration of the myocardium; (3) a pathological change in the pulmonary or carotid arteries.

Again, patients die from heart-failure when upon post-mortem examination no pathological change can be found in the heart or its complex surroundings. The direct action of the cardiac muscle when it begins to surrender its strength has been observed closely by the writer and others, and as a result of clinical experience it was observed that in some cases, when the heart failed to empty its contents from want of contractile power in the cardiac muscle, there was a gradual declination in the force of its pulsations, each becoming weaker and fainter until they finally ceased; in other cases the pulsations became irregular, and even ceased for a time, as if to gain renewed force, when the action would go on again for a time and then, by a tumultuous effort to expel its contents without effect, it instantly ceased its pulsations, the last effort being in diastole.

Over-strain as a cause of heart-failure frequently occurs when from any cause the aortic opening is narrowed, impeding the outward current to such an extent that both ventricles become distended from intraventricular pressure, causing the heart muscle to become wearied and unable to completely empty its contents. This condition exists quite frequently in women who have just passed through a severe and protracted labor. An old custom, encouraged especially by mid-wives, of having the woman in labor distend the air passages with air, retaining it as long as possible, impedes the circulation, as respiration and circulation are *pari passu*, and an enlarged limb is often the result, which only passes away when normal contractility of the myocardium returns. All

* Read before the Michigan State Medical Society, at Detroit, May 5, 1892.

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violent exercise spends its force primarily on the right heart, and when an extra amount of blood is carried to the lungs, it causes shortness of breath. The venous blood is emptied into the right heart with such rapidity and in such an amount that the lungs cannot take care of it. Shortness of breath follows, and a condition known to the laity as "out of breath" exists. In professional athletic performances, when exercise is begun and continued gradually, the lungs will accommodate themselves and take care of the blood as it is sent to them. This physiological phenomenon with reference to circulation and respiration is well understood by professional physical trainers of both men and animals. Great hopes are often realized in the second breath. In beginning active exercise moderately, the venous strain of the right heart is removed to the left, and the circulatory equilibrium established.

One or both of two conditions generally exist when the heart is strained—the cardiac muscle must be in a distensible condition, and a distending force be present. Dilatation, or distension, is often present in connection with some disease, and plays a very important part in the prognosis of the same. In all acute pulmonary diseases the above condition exists, and every physician is aware of the importance of maintaining the latent power of the central organ in pneumonia. When the temperature goes higher, with profuse perspiration, the apex beat may be in the normal position but less distinct, and the heart-sounds become feeble. The normal ventricular impulse of the first sound becomes shortened, and discrimination between the first and second sounds becomes more difficult on account of the sounds becoming similar. When the above symptoms occur in the course of any acute febrile disease, and especially in pneumonia, the heart is yielding to the extra strain put upon it, or its walls have become so weakened from a change in the normal constituents of the blood, and myocardial nutrition is so interfered with, that the patient succumbs in spite of our best efforts.

In diphtheria the heart is pale, flabby, and friable, with clots often in the right ventricle, and not infrequently an ulcerative endocarditis is present. In typhoid fever there is no organ that suffers so much, with the exception of the spleen, as the heart. In severe cases it becomes soft and flabby and of a grayish color, similar to that which occurs in diphtheria. The muscular fibrillæ of the heart wall undergo such a change that they are readily torn on moderate pressure. Microscopical examination reveals a granular condition closely resembling amyloid degeneration. These changes can be detected during the progress of the disease. The heart-sounds will become feeble according to the extent of the degeneration, the systolic contractions being so feeble that the first sound cannot be heard. In pyæmia, septicæmia, syphilis, and all diseases where a specific poison is introduced into the system, the integrity of the nerve function or irritability is interfered with.

The depressing effects of heat upon cardiac function are well known, and when with these we have undue strain of that viscus, from conditions stated, it can easily be seen what must be the inevitable result. Many cases of insolation are unaccompanied with cerebral disturbance, except indirectly. Often there is no loss of consciousness. But, while heat is a very effective predisposing factor, it does not account for all. This influence of heat on the heart deserves more attention.

The effect of overstrain of the heart is seen in two ways, as before stated. First, by an overwhelming distension, causing immediate faintness, or complete paralysis and death; or the dilatation may go on more slowly, from lighter daily strain, and with less immediate danger. When the shock does not terminate in the death of the individual at once, but only in syncope—in respect to which it may be said that it is about the only instance where this becomes a man's friend, as it is a notice of danger—the normal irritability of the heart is in a great measure lost. The cardiac muscles are in the condition of any others of the body in which the fibrils have been stretched unduly and separated.

Among those who first studied this condition of the heart, in this country, were Drs. Taylor and Da Costa, during the late war, both in the hospitals and in the armies in the field.

Statistics given by Dr. Taylor of cases examined during the late war show that the right ventricle dilates much more frequently than the left, in the ratio of 70 to 90, and of 320 deaths from dysentery and diarrhœa of the men returned in a state of utter exhaustion, three dropped by the wayside and were supposed to be dead. Their comrades brought them into camp, and they were made the subject of careful observation for weeks. In many other instances abundant opportunities were offered for a careful study of the effects of heart-strain, its diagnosis, and verification by autopsies. Dr. Taylor's conclusions were that this disease originates in a forcible dilatation of the heart by blood-pressure from within, the force falling chiefly on the ventricles, and it may occur suddenly when an individual is undergoing great physical strain, or it may come on more slowly and from causes not so distinct.

Strain sufficient to cause dilatation occurs most frequently in the right ventricle, and, indeed, some think that rapid dilatation only occurs in the right ventricle because of the thinness of the walls and its being subject to greater strain from *vis â tergo* of venous circulation, and the obstructive force *â fronte* which occurs in impaired circulation in the lungs and consequent respiration.

Dilatation from strain of the left ventricle originates from different causes to that due to the right. Either obstruction to the passage of blood in the vessels near to or remote from the central organ, or muscular pressure, the effect of which upon the heart is more gradual, will explain the reason why the right heart becomes dilated more frequently than the left.

Gardner gives a very simple experiment, which anyone can execute, in confirmation of the effect of retarding the pulmonary circulation, thereby causing a distension of the right ventricle. Place the finger over the apex beat when the impulse is felt most distinctly; lean forward to a stooping position and hold the breath during half the expiratory interval, continuing it as long as possible. The chest impulse will gradually diminish as the distension of the right ventricle goes on, until it is finally lost.

In another demonstration, performed on a dog of medium size, I opened the chest after performing tracheotomy, and observed the action and size of the ventricles. Then, placing the nozzle of a strong hand-bellows into the treachea, I inflated and distended the air cells; under this pressure the circulation in the bronchioles is obstructed, and, if the inflation is prolonged, the right ventricle can be seen to distend.

Another demonstration is to narrow the aorta by a ligature or pressure; the effect was to distend both ventricles, and by continuing the pressure moderately regurgitation took place through both the mitral and tricuspid orifices, and an apparent retarding in the circulation of the large veins could be observed during systole contraction.

These results were observed on normal hearts. It can be readily seen what effect similar pressure would have upon a weakened or diseased organ. Those who have continued the experiments further say that they have observed an œdematous thickening of the tricuspid and mitral valves.

My observation leads me to believe that the heart fails more frequently during high temperature than at any other time, and statistics taken during the late war point in the same direction. In the British Army Reports for 1881 and three years previous there was an average of 14.9 per 1,000 admissions for disease of the circulation among the home troops, while in the African division the average was 21.6 per 1,000, and at certain points was as high as 45.2. These reliable facts have a bearing upon the subject under consideration so far as we can compare heat and exercise in this country. We have in civil life many instances of disturbed action of the heart; many cases of insolation take place with no apparent cerebral disturbance, the mental faculties remaining clear. The above figures have reference to men who are physically well, as none others are admitted in the armies. But then many of those who are left among the old soldiers are suffering from a chronic bronchitis, dysentery, or rheumatism, causing a constant drain upon their system as the result of a strained condition of the central organ, resulting in dilatation during the late war!

Diagnosis and Treatment.—This is not an opportune time for the delineation of clinical cases, nor will space permit me to dwell

longer upon the differential symptoms and signs which are present than to observe in passing that the cause is to be looked for primarily in personal history, habits, etc., environment of the patient, and pain and shortness of breath. The pain cannot be easily located, but will often be described as extending over the whole of the middle of the chest, and often intense over the region of the spleen; in some cases vertigo—an intense feeling of distress in the thorax—often aggravated in the recumbent position. Pulse is soft, feeble, quicker than normal, and compressible, becoming rapid on slight exertion. In the first stages auscultation is negative; no valvular lesion, bruit, or murmur. But it is often difficult to distinguish between the sounds of the heart.

The leading indications in treatment are: (1) To make the heart competent to do its work; (2) to allay the hyperæsthetic condition of the nerve supply; (3) to eliminate any toxic element which would act as a disturbing cause.

The first indication is not easily fulfilled. The dyspnœa and œthopnœa which are present are leading signs of failing compensation. Digitalis, strophanthus, and other cardiac tonics are indicated, but must be given with caution, as over-stimulation of an over-worked organ may aggravate, instead of mitigating, the condition; even at best they only confer temporary benefit. For some cases of over-strained heart there is no medication that will be sufficient; the capacity of the heart must be considered, and the amount of strain put upon it must be adapted to the capacity of the organ. As to the second indication, to allay deranged nerve function, I have found atropine with strychnine an excellent combination.

In regard to the elimination of toxic elements, in many cases an exclusive milk diet will be a very valuable adjunct to any remedies selected, and the dyspnœa will be very much lessened. It promotes abundant diuresis, lowers arterial tension, and promotes the elimination of the poisons from the system. It is also bland, non-irritating, and does not give to the circulation materials which are not all eliminated, but remain in the system and become toxic themselves.

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Editorial.

THE CURE OF ADVANCED RABIES.

Professor Tizzoni, of the University of Bologna, describes his views of the proper treatment of advanced rabies.

He proved, in conjunction with Schwarz, that the serum from the circulation of an animal rendered proof against the hydrophobic virus reveals a disinfectant action, destroying the said virus when introduced by inoculation into rabbits, and this for an interval of time of about forty-eight hours. He next verified the validity of the doctrine laid down by Valli at the beginning of the century that the substance of the nervous system of rabid animals when, subjected to artificial digestions, loses its toxicity, and, moreover, when injected, that it acts like the medullæ of Pasteur, endowing the inoculated animals (always rabbits, as being more alive to the infection) with resisting power against rabies. So he set himself to inquire whether in the serum of animals rendered virus-proof there might not be contained an active principle capable of withstanding the hydrophobic infection. As the result of his experiments he found that the said serum destroys the virus of rabies not only *in vitro*, but even in animals in which the virus had been inoculated in the most certain of all ways, by means of the sciatic nerve. Not only does the serum of virus-proof animals prevent the development of rabies, but it cures hydrophobia even when it is already established—*e.g.*, with such unmistakable symptoms as paralysis of the lower half of the body, nervous prostration, fever, diminution of weight, and the general aspect characteristic of the rabid animal.

For his own method, the Bolognese path-

ologist claims a distinct advantage over that of Pasteur, as being efficacious even when the virus of rabies is already diffused throughout the nervous system, its efficacy having failed only in cases in which concurrently with the infection there were profound anatomical leisons. In man, consequently, recourse to the counteracting treatment should be had in the first period of the infection, as soon as this is revealed by its characteristic and numerous phenomena. No great quantity of the liquid is then required, and it may be injected hypodermatically or into the blood-vessels, care having been taken that it loses none of its virtue by exposure to light and heat.

Professor Tizzoni (assisted by his colleague in the Bologna Laboratory, Dr. Centanni, of whose coöperation he makes due acknowledgment) claims, by special methods and special solvents, to have succeeded in extracting from the medulla of a hydrophobic animal the vaccinating substance, deprived of its toxicity, which forms the active agent of the Pasteurian treatment. This substance, used as a prophylactic, invariably preserves infected rabbits; but when the treatment has been begun seven days after infection, it is quite inoperative. If, then, instead of resorting to the substance above mentioned, the serum of vaccinated animals be employed, advantage is taken of the "immunifying substance" (as Professor Tizzoni calls it) already elaborated in the organism of the virus-proof animal, a substance which acts directly on the poison of rabies. In other words, the vaccinating substance remains inert when the malady is developed; the "immunifying substance" enables us to combat the poison in cases where hitherto intervention of any kind has been unavailing.

Professor Tizzoni and Dr. Centanni are so satisfied of this that they await with confidence the application of their method to man, and meanwhile promise to make their clinical experience *publici juris* as soon as a sufficient number of test cases have come under their cognizance.

WHY SHOULD DOCTORS NOT ADVERTISE?

A correspondent sends us the following communication published in a Sydney (New South Wales) paper:

Why should doctors not advertise? There is not a more gross exhibition of professional Pecksniffism than that which passes as a medical axiom that a man of healing is not to tell the world that he can heal. The fact that some doctors degrade themselves as men as well as doctors by scandalous advertisements has no bearing at all on the matter. There are quacks in all trades, and the fact that some in his line scream about horrid sacrifices and shocking reductions does not deter the dignified and gentlemanly trader from telling people that he has goods for sale.

A merchant who stands among the princes of the land feels it no degradation to inform his fellow-men that he has received a cargo of so and so. He wants to turn his wares into gold just as the doctor does; but with a silly etiquette born in the dark ages, and when advertising was not, a doctor hushes up the fact, though he wants it known. It is about as sensible as the action of the lady in reduced circumstances, who found it necessary, in order to meet her temporary wants, to go into the street and sell fish, and who called out: "Fish oh! fish oh!" and then *sotto voce* to herself: "My gracious! I hope nobody will hear me."

The public should have no more toleration for the sentimental affection with which the doctors assume that their "stock-in-trade" is of so superfine a structure as to differ from that of everybody else. Surely it will not be pretended that it is more sacred from vulgar touch than that of the ministers of religion, who now all advertise their Sunday sermons and the burthen of the message that they have; and very properly so, because life is too short and hurried now for people to go hunting for what they want when there is a recognized source of information to which people are trained to look for everything relating to demand and supply.

Evidently the writer of this was not a disinterested observer. He possibly may have been taken to task by his more conservative *confrères*. He might be edified by reading from the Code of Ethics of the American Medical Association the answer to this question, which reads:

> It is derogatory to the dignity of the profession to resort to public advertisements, or private cards, or handbills, inviting the attention of individuals affected with particular diseases—publicly offering advice and medicine to the poor gratis, or promising radical cures; or to publish cases and operations in the daily prints, or suffer such publications to be made; to invite laymen to be present at operations, to boast of cures and remedies, to adduce certificates of skill and success, or to perform any other

similar acts. These are the ordinary practices of empirics, and are highly reprehensible in a regular physician.

It is to be hoped, in view of the fact that doctors do advertise in prohibited ways that the Committee of the A. M. A. who have in charge the revision of the code will in their report define more exhaustively what constitutes objectionable and permissible advertising.

WHY MUST WE SLEEP?

The theories of sleep are manifold. In this age of insomnia, when the consumption of hypnotics is phenomenal, a consideration of the cause of sleep is a step toward the intelligent treatment of insomnia.

Dr. M. Emanuel Rosenbaum, of Berlin, has recently published a work on "A New Theory of Sleep," and an interesting *résumé* of his opinions appears in the British Medical Journal, June 25, 1892.

Dr. Rosenbaum, with Germanic thoroughness, quotes the views of philosophers from Alkmaon, who lived 2,500 years ago, down to Dr. Preyer, who seems to be the latest authority on the nature of sleep. Most of these opinions are guesses pretty wide of the mark, and it is only within a few years that we have arrived at any real additions to our knowledge on the physiology of sleep. A state of intermittent repose is probably common to all organized beings. The acacia, which folds its primate leaves at sunset, may be said to sleep. This condition is, of course, more distinct in animals, which possess a nervous system. Sleep seems to involve, to a certain extent, the spinal cord as well as the brain. Goltz succeeded in removing almost the whole cerebrum of a dog, and keeping it alive for fifty-one days. He found that in this animal alternations of rest and unrest succeeded one another; before the time of feeding the dog was restless, when fed he became quiet and fell asleep. He could be waked by touching any part of his body. Dr. Rosenbaum tells us that pigeons deprived of their hemispheres appear to fall asleep periodically. It was long a subject of discussion whether, during sleep, there was more or less blood in the brain than in the waking condition; but it is now generally admitted that during sleep a portion of the blood deserts the brain, being probably replaced by the arachnoid fluid. In cases in which a portion of the skull has been removed, or in the trephined animal, the brain is observed to sink during sleep.

Congestion of the brain carried to a certain degree causes stupor; but what distinguishes stupor from ordinary sleep is the lightness with which the individual passes from the somnolent into the waking state. We cannot get rid of the effect of cerebral congestion, or rouse ourselves when under the effects of a narcotic; but we drop asleep in a moment, and a touch or a word in the ear can at once recall us from the realm of Morpheus to that of waking reality. What is the nature of this mysterious change which daily affects us, and which we have ceased to wonder at, because the riddle has so often baffled us? To dispel our ignorance Dr. Emanuel Rosenbaum presents us with a new theory. He observes that all organized tissues in active function have alternations of energy and rest. The heart, which keeps beating while life lasts, has its pauses during which it repairs its waste.

Vital action does not run on till its materials are exhausted; but there comes a period when it stops to renew its power, and then it begins again. Dr. Rosenbaum observes that the brain remains in function during the waking state, and repairs its losses during sleep. Sleep is owing to the used-up material in the nerve tissues being replaced by watery fluid. The greater the watery contents in the nerve tissues, the less is the irritability, until there is absolute loss of function. This increase of watery contents follows the chemical changes of nerve substance which take place during and after nervous activity. This water, which replaces the nerve substance, is expired through the lungs in the form of aqueous vapor principally during sleep. The absorption of the water into the venous current happens according to the laws of diffusion, and is dependent upon the volume and thickness of the blood, its relation to the solids, and the rapidity of the circulation. The giving off of these vapors through the lungs is dependent upon the laws of diffusion of gases, the pressure of the air, and the amount of water

it already contains. Dreaming and sleep walking are dependent upon the unequal quantity of watery fluid in different parts of the brain.

Dr. Rosenbaum seeks confirmation of his views by the observation that people are more disposed to sleep when the air is saturated with moisture, and that children who sleep a great deal have more water in the tissues of the brain. He cites the observations of Schiff and Harless that the excitability of nerves is diminished by an increased absorption of water into their substance, and seeks to show that in the diseases in which there is a marked tendency to lethargy or coma the nervous substance becomes softer and more watery in consistence.

Here it may be observed that loss of function might be expected to follow the replacement of the normal material by any other element, whether fluid or solid, and that, in fact, we have a tendency to sleep or increasing stupor with hardening of the brain when the fluid which replaces shrinkage is deposited under the membranes on the outside of the nervous substance.

Dr. Rosenbaum's theory does not help us to explain hypnotic sleep or hibernation, and, in spite of his labored arguments about the nature of the changes and decompositions in the organism, his theory lacks proof. Dr. Rosenbaum even ventures to answer the celebrated question of Molière: Why does opium cause sleep? It is because it acts upon the respiratory centres, and thus diminishes the number and depth of the respirations. This causes œdema of the brain and increase of its watery contents. We may ask: Why does opium act upon the respiratory centres? and unless Dr. Rosenbaum can answer this he will have to fall back upon the famous "explanation": "Quia est in eo virtus dormitiva cujus est natura sensus assoupire."

After all, science can scarcely explain the why of anything. It merely points out the order in which natural processes occur. Pflüger holds that sleep is caused by the products of decomposition, lactic acid and creatin, taking up the oxygen in the blood. The functions of the grey matter of the cortex cannot be exercised without a plenteous supply of arterial blood any more than the zinc and copper of a voltaic pile will evolve electricity without the sulphuric acid. Thus the blood conveys a stimulus or imparts a capacity to the nerve tissues during walking, while during sleep it has a separate and distinct function—that of repairing waste. Apparently these two processes cannot go on in the brain at once, or at least only to a degree too limited to prevent a speedy exhaustion of the vital powers if sleep be withheld. There is a striking disparity in the time required for sleep by different persons. Some men, like the Emperor Akbar, St. Francis Xavier, and General Eliot, the defender of Gibraltar, could do with as little as four hours' sleep, while other men need ten hours or even half the twenty-four. But all must sleep. A cruel form of capital punishment in China consists in artificially keeping the culprit awake till he dies from exhaustion.

THE TOPICAL TREATMENT OF CYSTITIS BY CORROSIVE SUBLIMATE.

The treatment of cystitis is often unsatisfactory to the physician. Of the many methods of treatment, the antiseptic is the most approved.

Guyon (Annales des Mal. des Org. Génito-urinaires) arrives at the following conclusions, based upon his observations and the results obtained by the topical application of corrosive sublimate in the following twenty-six cases of cystitis:

Of ten cases of tubercular cystitis, five were greatly ameliorated; two of these he would call cured if it were not for the difficulty of exact diagnosis, and the well-known tendency to relapse in all conditions of tubercular origin; and he lays special stress upon the fact that in two cases the corrosive sublimate was well borne, the reverse being true of all other medicaments whose topical applications he had studied. Of seven cases of gonorrhœal cystitis, four were cured, one ameliorated, and two were unsuccessful. Two cases due to prostatic enlargement were speedily ameliorated, and one case of pseudo-membranous cystitis was cured.

In all his observations he has seen no harmful results from this method of treatment.

Book Notices.

DISEASES OF WOMEN: A Manual of Non-Surgical Gynæcology Designed Especially for the Use of Students and General Practitioners. By F. H. Davenport, M. D., Instructor in Gynæcology, Harvard Medical School. Second edition, revised and enlarged. Duodecimo, 314 pages, 107 illustrations. Cloth, $1.75. Philadelphia: Lea Brothers & Co. 1892.

This book does not aim to be a text-book or to be devoted to a complete consideration of the gynæcological art.

Its purpose is to give the student clearly, and in detail, the elementary principles of the methods of examination and the simple forms of treatment of the most common diseases of the pelvic organs, and to help the general practitioner to understand and treat the multitudinous ailments of women which he meets with in every-day practice, which do not require surgical interference.

At the present time, when there is a decided reaction from the fad of operative interference and the trend of opinion is toward a thorough trial of medicinal and hygienic rather than surgical treatment, this second edition is opportunely published.

CONTENTS OF NEW ENGLAND MAGAZINE FOR JULY.

The Heart of Chicago, Franklin H. Head; The Meaning of the Song, Elizabeth K. Reynolds; In Crowded Ways, Edith Mary Norris; The French Canadians in New England, Prosper Bender; Two Souls, Minna Irving; The Republic of Mexico, Don Cayetano Romero; Two Words, F. E. B.; Impressionism in Painting, William Howe Downes; A Modern Lear, Ethelwyn Wetherald; Edward Augustus Freeman, William Clarke, M.A.; Stricken in England, Anthony P. De Freitas; The True Bonivard, the Prisoner of Chillon, W. D. McCrackan; An American Stonehenge, Thomas Wentworth Higginson; Future Electrical Development, Professor Elihu Thomson; Why Flowers Blow, "Pearl Rivers;" Witchcraft in Connecticut, Professor Charles H. Levermore; Mutation, George Edgar Montgomery; The Town of Winthrop, Albert Winslow Cobb; Black Bass Fishing in New England, Charles Frederick Danforth; Tom's 'Liza, Edith Elmer; The Socialism of James Russell Lowell, Edward Grubb, M.A.; Concerning Short Stories, Walter Blackburn Harte; The Editor's Table, Edwin D. Mead.

CONTENTS OF SCRIBNER'S MAGAZINE FOR JULY.

The Mausoleum of Galla Placidia—Ravenna. Frontispiece. Drawn by E. H. Blashfield; engraved by C. I. Butler.

Among the Poor of Chicago. By Joseph Kirkland. [The fourth article in the series on "The Poor in Great Cities."] Drawings by Otto H. Bacher, H. T. Schladermund, and Ella P. Morrill.

Getting Out the Fly-Books. By Leroy Milton Yale. With a headpiece and initial by the author.

White Edith—A Story Re-told. By Thos. Bailey Aldrich.

The Art of Ravenna. By E. H. Blashfield and E. W. Blashfield. Drawings by E. H. Blashfield; engraving by Wolf, Heard, Heinemann, C. I. Butler, and J. Clément.

The Wrecker—Chapters xxiv, xxv, and Epilogue. By Robert Louis Stevenson and Lloyd Osbourne. (Begun in August, 1891—concluded.) With a full-page illustration by W. L. Metcalf.

The Depths of the Sea. By N. S. Shaler. Drawings by Charles Copeland and A. Zenope; engraving by Varley, Leblanc, Van Ness, and George Del'Orme.

The House Over the Way. By Charles E. Carryl.

The Evolution of a City Square. By Samuel Parsons, Jr., Superintendent of Parks, New York City. Drawings by V. Pérard; engraving by Witte, C. I. Butler, and E. H. Del'Orme.

To Trojan Helen. By W. G. van Tassel Sutphen.

The Pianner Mares. By Martha McCulloch Williams.

In Marble Prayer. By Julia C. R. Dorr.

Historic Moments: The Resumption of Specie Payment. By J. K. Upton, ex-Asst. Secretary of the Treasury.

The Point of View: Free Art—Money and Culture—The General Reader—Athlete and Pedagogue.

Notes and News

The Evils of the Cocktail Habit.—

In an address before the Cambridge Temperance Association, published in the British Medical Journal, Professor Humphry raised his voice against the habit of tippling or nipping—taking a glass now, a glass then, and a glass often; in the morning (which was worst of all), at the mid-day meal, in the afternoon, and in the evening. Even more than drunkenness, he said, this was terribly damaging to the system; it made men sodden, and was evinced in a general shakiness of the hand, sometimes of the step, and above all of the tongue—in fact, a general shakiness of all the organs. The "nippers" succumbed to slight accidents, slight illness, or slight shocks of any kind. Prick them, and the life, as it were, ran out of them. They said: "My work is hard," and they took the very means which unfitted them for good and prolonged work. By temperance in drink he meant that nothing should be taken whatever, under any conditions, except at meals, and very little then. Those who could not be absolutely temperate, and content with moderation, should become total abstainers.

Origin of the Term "Grippe."—

La Médicine moderne gives an extract from a meteorological journal kept at Versailles in the eighteenth century, and in which the meteorological variations are carefully noted day by day, with a few reflections upon remarkable atmospheric occurrences—storms, hail, thaw, etc. Commenting upon the months of February and March, 1743, the journal says: "There was a prevalence of colds and inflammations of the chest at Versailles and Paris. The king named this malady 'la grippe.' It was observed that bleeding was wholly contra-indicated. Such persons as had not been bled, and who drank much, were the most quickly cured."

It results, then, from this document that it was King Louis XV who gave the name of grippe to the influenza that then prevailed under a meteorological state, as the journal shows, analogous to that of recent years and of the present year.

The Mississippi Valley Medical Association.—

This Association will hold its eighteenth annual session at Cincinnati, Wednesday, Thursday, and Friday, Oct. 12, 13, and 14, 1892. An excellent programme will be presented. The address on surgery will be delivered by Dr. Hunter McGuire, President of the American Medical Association. The address on medicine will be made by Dr. Hobart Amory Hare, Professor of Therapeutics and Clinical Medicine, Jefferson Medical College, Philadelphia. The social as well as the scientific part of the meeting will be of the highest order. The officers of the Pan-American Medical Congress will hold a conference at the same time and place. Charles A. L. Reed, M. D., Cincinnati, is President of the Association, and E. S. McKee, M. D., Cincinnati, Secretary.

Suicide During Parturition.—

Recently, a case occurred in Wigan, England, where the woman, after some hours of labor, and upon the midwife telling her that it would be necessary to have the aid of a medical man, owing to its being a breech presentation, while the husband went for the doctor, left the house, notwithstanding the protestations of the nurse, and when the doctor and husband returned she was nowhere to be found. Next morning her body was found in the canal with the newly-born infant. The shock produced by sudden immersion must have caused the uterus to expel its contents.—*Lancet.*

The New University of Pennsylvania Dormitory.—

The sum of $120,000 which Provost Pepper agreed to furnish toward the erection of a new dormitory building at the University, provided the alumni furnish the remaining $30,000 necessary, places that fund within $15,000 of the amount required, and insures the beginning of the work at an early day.

The American Electro-Therapeutic Association —

This Association will hold its second annual meeting in New York, at the Academy of Medicine, on October 4th, 5th, and 6th, under the presidency of Dr. W. J. Morton.

Therapeutic Brevities.

Salicylate of Bismuth in Infantile Diarrhœas.—Mikhnevitch (Med. Obozrenië, No. 6, 1892), having tried the salicylate of bismuth in 50 cases of diarrhœa in infants under 2 years of age, reports that, of the number, only 2 died (a boy of 8 months, with pelvic suppuration consecutive to intractable colitis; and an infant of 5 months, born prematurely and exceedingly sickly since its birth). The following formula is recommended:

℞ Bismuth salicylici, gr. xxiv.
Gummi arabici, ʒ j.
Sacch. albi, ʒ jss.
Terendo adde aq. dest., ℥ ij.
Fiat lac, tum adde aq. dest., ℥ iv.

M. D.S. The bottle to be kept in cold water or ice, and to be shaken well before use. One or two teaspoonfuls to be given from three to six times daily.

Each teaspoonful of the mixture contains about ½ grain of the salicylate, which constitutes a normal dose (three or four times daily) for an infant of from 6 to 8 months old. In cases of offensive diarrhœa the administration should be preceded by a dose of castor oil. The bismuth salt should be given regularly until the diarrhœa has completely subsided.

Potassium Iodide in Urticaria and Asthma.—It is an observed fact that urticaria frequently occurs in individuals affected with asthma. Having noticed the good results obtained in cases of asthma by the internal use of iodide of potassium, Stern (Muench. med. Woch.), has applied it with success in cases of chronic urticaria. He prescribes it in the following manner:

℞ Kali iodidi., ʒ j.
Aquæ distillat., ℥ v.

M. Sig.: A tablespoonful three times a day.

To avoid iodism five to ten grains of bicarbonate of soda may be taken two hours after each dose of iodide of potassium solution has been administered.

The Rational Treatment of Pneumonia.—B. Reed (Therap. Gaz., March and April, 1892) urges the justice of the following conclusions: That water locally applied—either as wet pack or baths—is the most efficient single therapeutic measure in acute pneumonia; that veratrum viride or aconite can accomplish more than any other single drug in the first stage, and that the same is true of digitalis in the second stage; that a combination of one of these cardiac sedatives with opium and diaphoretics affords not only a safe but a highly successful internal treatment for the first stage of acute pneumonia, being capable of aborting the disease when its administration is begun near the onset, and repeated at short intervals day and night.

Injections for Chronic Cystitis.—Ultzmann recommends the following prescriptions in the treatment of this troublesome condition:

Crystallized carbolic acid, gr. xv.
Distilled water, ℥ iijss.

Dissolve, and mix equal parts of hot water at the moment that the liquid is to be injected.

Or the following:

Boric acid, ℥ ss.
Glycerin, ʒ j.
Distilled water, ℥ x.

Make a solution, and mix with equal parts of warm water at the moment of employment.

—*New York Medical Record.*

Amyl Nitrite for After-Pains.—I am satisfied that in many cases a nice warm meal is better than any medicine. Still, I have had several cases in which the pains were exhaustingly severe, and in which I was glad to turn to nitrite of amyl. This potent drug is a very efficient controller of after-pains, and, used cautiously, I see no reason to apprehend harm from it. A neat way to use it is to saturate a small piece of tissue paper with five or six drops, stuff this into a two-drachm vial, and request the patient to draw the cork and inhale the odor when she feels the pain coming on. It acts with magical celerity.—Dr. Winterburn, in *Journal of Obstetrics.*

Treatment of Erysipelas.—Dr. Paul Niehans has employed the following treatment with much success; He paints around the affected extremities a streak of collodium, about the breadth of two hands, so that after it has dried the limb appears as if constricted by a bandage. The erysipelas never spread beyond this fence. This procedure may be utilized in cases of erysipelas of the thigh, even if the inflammation has extended to the inguinal region. In erysipelas of the face

excellent results were obtained, improvement occurring within two or three days.—*Centralbl. f. Chirurgie*, No. 15, 1892.

Successful Treatment of Baldness.—Alopecia areata has been successfully treated by Dr. Moty (Rev. Chir. et Terap., No. 10, 1891) by subcutaneous injections of corrosive sublimate, in from 2- to 5-per-cent solution, so as to surround the bald spot, five or six drops being injected at a time. It is said that the injections produce neither pain, nodules, nor other disagreeable symptoms, and are much more efficacious than other plans of treatment.

Oil of Cloves for Mosquito Prevention.—A correspondent of the Indian Medical Record writes: I hardly get into bed when I hear the musical notes of my friends the mosquitoes buzzing around me. I pour three to four drops of oil of cloves on my pillow, which has the effect of instantaneously dispersing the blood-thirsty gang. I have tried this for several successive nights with equally felicitous results, and enjoyed perfectly undisturbed rest.

Cocaine in Intra-uterine Injections.—Lediberder (Rev. de Chir., May 10, 1892) mitigates and even prevents the pain caused by tincture of iodine when used as an intra-uterine injection, by first injecting a 1-, 2-, or 3-per-cent. solution of cocaine. If this solution is kept in contact with the uterine mucous membrane for two or three minutes, the iodine injection causes no pain.

Hypnotic Suggestion for Impotence.—Impotence, according to Gywrkovecky, may be cured in its varied forms by hypnotic suggestion, which he has also found a very useful means of treatment in masturbation, nocturnal pollutions, etc. In three cases of sexual neurasthenia he has had complete success from suspension in the Sayre apparatus.—*Weiner med. Presse*, No. 46, 1891.

Sedative Dust for Tender Feet.—Half an ounce zinc oxide, ½ drachm prepared chalk, 20 minims oil eucalyptus, to be dusted freely over the feet, and into the heels and toes of the stocking.

Medical Progress.

The Pre-tubercular Condition.*—J. Hilgard Tyndale, M.D., in the Climatologist, May, 1892, says: Consumptives may be divided into three classes, according as the lesions are: (1) Infiltration caused by mechanical pressure—the result of fixed pleuritic adhesions on the one hand and of connective-tissue proliferation and contraction in the lung itself (so-called chronic peribronchitis) on the other. (2) Infiltration as a remnant of acute disease, or of as yet strictly localized tuberculosis, the bacillus having forced an entrance into non-resisting cells. (3) More or less rapidly diffusing tuberculosis, preceded by a lowering of the general condition. The third class takes its starting-point from an impaired general condition, and it is of this I wish to speak. I hold it as a maxim that localized tuberculosis does not endanger life of itself, so long as the general nutrition begets a reasonable resisting power of the pulmonary tissues. Hence, where the starting-point is an impaired nutrition, we are dealing with the true pre-tubercular condition.

My starting-point, then, is general *malaise* as yet unaccompanied by any physical signs in the lungs, not even by modifications in rhythm or pitch of breathing. I will not dwell upon predisposition or acquisition, any more than to say that, beginning with fœtal life, colonization is favored by (1) Transmission with the ovum, kept in latent abeyance, and (2) inherent inability, in bodies built after the type of phthisical habitus, of the leucocytes to digest the bacillus tuberculosis.

Acquisition of the bacillus in later life is favored in the apparently healthy by (1) insufficiency in anatomical development of the thorax; (2) insufficiency in physiological expansion, as in ossification of the cartilages; and (3) parts of lung confined by pleuritic adhesions afford facility for a prolonged lodgment of the bacilli—they receive both board and lodging for a term sufficient for their development. This is especially true of the lower lobes. The two conditions of lessened mobility of the chest, and a consequent stagnation of air, are shown in a tendency of the upper lobes to tubercular invasion. From the above causal elements I now coin this general maxim: Constructive or destructive metabolism is inherent in the person.

Now let us consider the true pre-tubercu-

*Read before the American Climatological Association at Washington, September, 1891.

lar condition, both in the constructives and destructives. To clear my path of obstructions, let me briefly exclude considerations of age, sex, or race; influences of previous general disease (typhoid fever), or of still present general trouble (syphilis, diabetes), also remnants of acute lung disease; suppurating wounds or other septic sources within the body; cheesy glands in the neck or axilla as sources of direct infection. All these latter are centres of infection from demonstrable local sources.

Now, excluding all general and local diseases enumerated above, we see our way clear to the true pre-tubercular condition. We are consulted by a person who complains first and foremost of general malaise. This general malaise is readily shown to be composed of partial failure of several or all functions of the body—inability to exercise the motive power (muscular debility), known as feeling "sawed off in the legs;" sensation either more acute or dulled; sleep either fitful or too profound—always extremes; variable digestive capacity; superficial breathing; and last, but not least, a rapid heart's action. In other words, there is a falling off in the daily routine of eating, breathing, elasticity in walking, refreshing sleep, buoyancy of mind, to which are added vague disturbances of sensation. As yet there is no elevation of temperature. This is the rough picture of the general condition—by inclusion, if I may so call it. By exclusion you will now find acute diseases (typhoid fever, for example) absent; likewise chronic ones, of which diabetes may serve as an example.

We now turn to the local condition and find that, as yet, inspection, auscultation, and percussion furnish no clue whatever, not only as to dry and moist râles, but not even as to changes in the respiratory elements of quality, pitch, or rhythm. This leads us to our second maxim: All more than temporary removals from well-being of which the patient has been conscious for weeks, or perhaps even months, and which cannot by careful diagnosis be made to fit into the frame of a recognized acute or chronic functional or organic trouble, represent the true pre-tubercular condition Correct appreciation of the pre-tubercular condition can only be arrived at by exclusion.

Nothing remains now but to sharply outline the exact sequence of events in the pre-tubercular condition, and to make the picture as clear and distinct as possible I shall divide the events into stations. Please bear in mind that I am to give in a few words the whole course of the pre-tubercular patient's disease from beginning to end, and remember that the first station is entirely made up of subjective symptoms and represents the true pre-tubercular condition. The second and third stations are made up of the same subjective malaise *plus* the objective findings in the lungs, and merge into well-known types of tubercular invasion.

Station 1; Subjective: General malaise, not fitting into the frame of recognized acute or chronic disease; in this respect comparing to neurasthenia, also diagnosed by exclusion. As stated above, general malaise is a falling off from the individual norm of eating, breathing, muscular power, refreshing sleep, buoyant mind, etc. This impaired general condition leads up to the local lesion, both subsequently uniting to bring about destruction.

Station 2: The above subjective symptoms *plus* the objective change in the character of the respiratory elements, but as yet no râles. either dry or moist. In the second period the general condition has advanced to noticeable loss of adipose tissue in some, or of red blood-corpuscles to the verge of pernicious anæmia in others, or both combined. The order of importance in respiratory changes in auscultation is: (1) Quality, (2) pitch, and (3) rhythm. The changes now occurring are in the reverse order of their importance—rhythm first, then pitch, then quality. This is the main point I wish to emphasize. *Rhythm:* Interrupted (cog-wheel) inspiration, a pause not existing in the norm, a prolonged and audible expiration. *Pitch:* Higher than the original vesicular low pitch. This holds good of both auscultation and percussion, in accord with Dr. Leaming's great law; low pitch denotes porosity, high pitch denotes density. *Quality:* From vesicular to broncho-vesicular, and finally bronchial, or tubular as I prefer to call it.

Station 3: Dry followed by moist râles and gurgles, according to whether the tubercular invasion begets a localized or a widespread bronchiolitis or local excavation. The third station for pre-tuberculars, then, is either a direct rush into diffused tuberculosis (general bronchiolitis, or tubercular pleurisy) in those of destructive metabolism, or a more gradual destruction by infiltration and excavation, perhaps with subsequent limitation, in those of constructive metabolism.

In conclusion I offer the following maxim: The pre-tubercular condition is an as yet undemonstrable tubercular invasion, engrafted upon those whose nutritive changes have brought them to a condition below par as compared with their usual physiological standard. This physiological unit is strictly and absolutely individual.

THE TREATMENT OF CHOREA IN THE HOSPITALS OF PARIS. — Marcel Beaudoin (Revue de Thérapeutique), after consulting the physicians of the hospitals of Paris, publishes the different opinions expressed regarding the treatment of chorea. In ordinary cases Sée recommends antipyrin and arsenic as the best remedies. In rheumatic cases the salicylate of sodium, according to this author, should be associated with the antipyrin and sulphur baths. In cardiac choreas, to the heart remedies should be added the administration of iodide of potassium, and especially the iodide of calcium.

Gilbert Ballet believes that common chorea tends to a spontaneous cure, and that, therefore, all disturbing medication should be withheld. He condemns antipyrin, but recommends arsenic (Fowler's solution in small doses, that is, from six to twelve drops a day, according to the age of the patient), tonics and iron in anæmic cases. In serious cases he advocates the local application of ether to the vertebral column, and the bromides in patients laboring under psychical troubles. Above all, the author advises hygiene, a good alimentation, and walking in the open air, avoiding fatigue.

According to Dejerine all special medication in infantile chorea is useless. He recommends tonics, massage, gymnastic exercises, dry frictions, salt baths, and particularly insists on the application of good hygienic measures. In mild cases Joffroy attaches particular importance to allowing children to sleep as long as possible; in such instances he is wont to employ daily doses of from 1 to 1.75 grammes of chloral, according to the age of the patient. Fatigue, as well as all physical and mental excitement, should be avoided. In serious cases he believes antipyrin is useless, and he then resorts to the application twice a day of wet cloths.

Antipyrin has given the best results in the hands of Albert Robin. He combines this drug with bicarbonate of sodium, and gives it in as high a dose as two grammes a day. After fifteen days' use the antipyrin is substituted by arseniate of sodium in doses of two teaspoonsful a day, of a solution of five centigrammes to 300 grammes of water. This solution finished, it is followed by the readministration of the antipyrin. Raymond thinks that only two remedies are to be relied upon in the treatment of chorea, chloral and antipyrin; he has seen acetanilid do good in some cases. Sevestre believes in use of both antipyrin and arsenic. The first medicament is administered in doses of from one to two grammes, and even three and four grammes a day. He employs, at the same time, Fowler's solution in daily amounts of from six to twelve drops, or a solution of the arseniate of sodium (five centigrammes in 250 grammes of water) in doses of two to three dessertspoonfuls a day. Massage, according to Ollivier, has given satisfaction in the treatment of choreic patients. This author also prescribes, as a general medication, iron, arsenic, and hydrotherapy.

D'Heilly recommends hygienic measures, tonics, and prolonged sleep. In slight cases he thinks that such remedies as arsenic, iron, bitters, and baths are sufficient. In more serious cases he resorts to antipyrin and chloral as the best drugs. Antipyrin is likewise highly recommended by Legroux in doses of four grammes per day. In hysterical cases the bromides and cold douches have given him the best results. Comby insists on the applicatian, firstly, of a moral and physical hygiene; secondly, in the sedation of the system by bromide of potassium, in daily doses of from two to four grammes, and the use of cold douches. If no amelioration follows this treatment, antipyrin, in daily amounts of from two to three grammes, should be resorted to.

Jules Simon gives the following points: (1) During the first fifteen days the child is to lie in bed, and revulsion applied over the upper part of the back, by warm frictions, mustard plasters, or dry cupping, and the use of aconite and hemlock. (2) After this time, the child is made to get up, and antipyrin should be administered in progressive doses of one, two, three, four, and five grammes in the twenty-four hours; this medicament to be continued for several weeks. (3) This period, especially when the movements are sluggish, should be followed by rhythmical gymnastics. The same author prescribes, at the same time, the least exciting tonics, such as salt baths, dry frictions, etc.; but a stay at the seaside is condemned.—*University Medical Magazine*, June, 1892.

SLEEPLESSNESS. — Whether, as appears likely, sleeplessness is more characteristic of our own days than those of our predecessors, or that, in accordance with a scientific fashion, it is now more noticed, we certainly hear of its prevalence with somewhat startling frequency. The nostrums proposed for the cure of this disorder are numerous. Many, if not most of them—we do not for the moment speak of narcotic drugs—are empirical, and are cast upon the public intelligence without any conscious reference to causes

actually at work upon the brain and other nervous tissues. It does not necessarily follow that they are valueless, and we should no more think of repudiating their ordinarily legitimate exercise than of refusing the occasional aid of such medicinal agents as may be trusted safely to discharge the same needful function. It is to be understood, however, that we would, wherever possible, avoid, and replace by simpler non-medicinal methods, even such occasionally useful aid. This attitude is but rational, if we consider that the true object of treatment is never by choice merely palliative, but curative, and for cure there is needed the detection and removal of an active cause. The revelation of the causes of insomnia is, indeed, no simple matter. Thus much, however, we may say—namely, that just as the state of the brain in normal sleep implies a quiescent cerebral circulation somewhat reduced in volume, so in those whose nights are habitually restless we shall commonly find a condition of cerebral vascular tension. This, let it be noted, is not incompatible with general anæmia or with defective brain nutrition. There is, indeed, nothing so conductive to local vascular congestion as the constant exercise of a weakened organ. Mental worry thus acts upon the jaded brain, and we need not wonder, therefore, that it "murders" sleep.

The true means of relief is as clear as it is often impossible. In such cases, however, and still more in others where adequate, or even more than adequate, nutrition is maintained, we find a simple and ready antidote in physical exercise. Muscular activity, in fact, may be employed to balance nervous irritation. In it we provide a means of counter exhaustion. There is a transference of vascular excitement and of tension, with corresponding relief at the site first affected. Further, the same process implies the stimulation of the general metamorphic energy and the removal from the tissues of irritant excretable products. This brings us to another cause of insomnia, particularly of that which we sometimes observe in the gouty and rheumatic. It is probably on the ground of removal of such superfluous substances that we must explain the salutary action of the traditional "night-cap" of hot water, or the boiled onion, a stimulant of the kidney, at supper. Where mental over-activity or irritation has to do with insomnia, the influence of change—that is, of a change in thought—should have a trial. It is no doubt a blind groping after this remedy that induces some to read themselves asleep. Better in several ways is the practice introduced by the German Kant, who spent some time before he retired for the night in cutting off by a effort of thought each mental occupation of the previous working hours. We might, however, multiply the stock of remedies without meeting all possible needs. The desirable course for any sleepless unfortunate to adopt is obviously not to resort to sedative drugs to allay distress, but to seek advice of his trusted medical attendant and its remedy in the discovery and the removal of its cause.—*The Lancet*, June 11, 1892.

QUEBRACHO IN PNEUMONIA, ASTHMA, BRONCHITIS, ETC.—R. Lawrence, M. D., in the St. Louis Clinique, June, 1892, says: Last summer my attention was called to an article on the virtues of the fluid extract of quebracho. I read it carefully, and found that to this drug was attributed a result claimed for no other, so far as I am informed. The remedy was mentioned in the above named diseases because it has the power either to enable the red blood corpuscles to assimilate more oxygen, or to so stimulate the muscles of respiration that deeper and slower respirations are taken, probably the former.

I carefully noted the virtues claimed for the drug, and determined to try it upon the first favorable opportunity. I looked up all the literature obtainable, and found no dangerous action mentioned, when given in ordinary doses.

Last month I had a case of double pneumonia of a most severe type. The symptoms were all alarming, and as my patient, a little girl of eleven years, was breathing for days at a time at from 65 to 80 per minute, I concluded that the case very much needed something to diminish the rapid, short breathing. I accordingly obtained some fluid extract of quebracho, and commenced giving five drops every two hours. It seemed to have no very decided effect. I knew my dose was too small, but it being a new remedy in my hands, I concluded to feel my way carefully along, drop by drop. This I did until I was giving twelve, later on fifteen, drops every two or three hours. I found that the latter quantity had a most beneficial effect. The pulse, which was about 120 and not very strong, became slower and stronger, and in about one hour and a half after giving the drug the breathing would fall from fourteen to eighteen respirations per minute. The remedy was given every two or three hours for two days at a time, and was followed by the happiest results. My nurse, a very ob-

servant and intelligent man, to whom I explained the action of the remedy, carefully noticed the effect on the respiration, and soon found that it slowed and deepened the breathing. The drug is a native of South America, and by the natives is used as a tonic.

Several nights ago I had another opportunity of trying its effect, as I was called to visit a lady suffering severely from asthma. It was a case complicating Bright's disease, and obstinate to treatment. One-half a teaspoonful of the fluid extract of quebracho gave her prompt relief from the distressing desire for breath. It did not remove the spasm from the tubes, but very perceptibly alleviated the suffering, and the patient readily gave evidence of relief. It is also highly spoken of in the treatment of phthisis and croup.

The remedy is new, and is certainly a most valuable one, and every doctor should acquaint himself with its virtues.

Color-Blindness and a Practical Remedy for It.—Dr. A. E. Wright, discussing the subject of the pathology of color-blindness, adopts provisionally the theory of Hering regarding the perception of color. This assumes that the color-sense can be best accounted for by assuming the existence in the retina of two sensitive layers, each of which is subject to modifications in two opposed directions by a corresponding pair of contrast colors. Hering obtains six fundamental colors, viz., green and red, blue and yellow, white and black, associated together in pairs. Hering's experiments led him further to conclude that in green-red blindness, which is the common form of achromatopsia, there is either an excessive or insufficient amount of retinal pigmentation. Apart from any theories, however, Dr. Wright states it to be a fact that total color-blindness is very rare indeed; also that yellow-blue color-blindness is extremely rare. The common form is the green-red blindness. Now, it so happens that in the establishment of signals, green and red lights form the most commonly used colors. Hence from three to five per cent. of men capable of doing work as pilots or engineers are kept out of such employments, often with results that are almost cruel. Most color-blind men are not perfectly color-blind, but can readily distinguish yellows and blues. Hence it is proposed that the red lights should have a distinctly yellowish tinge and the green lights a distinctly bluish tinge. In this way the difference between signals could be readily made out by almost all the color-blind.

The suggestion is a good one, for it is impossible always to exclude the color-blind from services calling for a knowledge of color-signals. Such a change in the lights would not interfere with the present methods of signaling, and would tend to make it safer.—*Medical Record.*

The Therapeutic Value of Hæmoglobin.—In many cases of anæmia where ferruginous preparations are contra-indicated, P. Castellino (Rev. clin.) prescribes hæmoglobin. The following are his conclusions from its use in fifteen cases: (1) The absorption of hæmoglobin is uniformly rapid. (2) It is well tolerated, even by patients having digestive troubles, and never gives rise to symptoms of intolerance, such as vomiting, meteorism, constipation, epigastric oppression, gastralgia, pyrosis, etc. (3) Its favorable action on the blood is manifested by an increase in the number of red blood-globules, their resistance, their specific gravity, and their color, their form and diameter soon approaching the normal. (4) Under the influence of hæmoglobin the general condition of the patient improves, as shown by the return of the appetite, the regulation of the menses, more energetic nutrition, increase of body-weight, increase of dynamometric force, the favorable influence on the secretion of urea, and the disappearance of various subjective phenomena of anæmia (erethism, dysphagia, gastralgia, palpitation). (5) If the hæmoglobin is not continued until the patient is well, its action is only transitory and soon disappears. (6) In cases of secondary anæmia (carcinoma, tuberculosis, leukæmia, etc.) hæmoglobin is of little or no use, or, at most, the effects are but transient. (7) A daily dose of 0.20 gramme (3 grains) of hæmoglobin is sufficient to obtain a perfect cure. (8) Hæmoglobin is distinguished from other ferruginous preparations by the rapidity of its action; when anæmia is unaccompanied by digestive troubles and when there are no phenomena of intolerance the latter give as favorable results as hæmoglobin. (9) Hæmoglobin is preëminently indicated in cases of anæmia with serious digestive disturbance and in the convalescence of fevers and maladies of long duration.—*L'Union médicale*, December 22, 1891.

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Original Articles.

PELVIC ABSCESS WITH ABDOMINAL OPERATION.*

BY E. E. MONTGOMERY, M.D.

I bring before you a patient to-day who entered the hospital only two days ago, suffering from pelvic trouble. She had at that time a temperature of 102° and was suffering from severe pain, so much so as to indicate probable peritonitis. Upon examination it was found the uterus was more or less fixed in the pelvis, with an exudation, more particularly on the right side, filling up the right broad ligament. The patient is a Polish woman, consequently our ability to ascertain much of her previous history has been limited; we know sufficient, however, to determine the fact that this has probably arisen as a result of gonorrhœa. It is questionable whether the mass we feel in the pelvis is the result of the rupture of the tube and the development of a secondary sac within the broad ligament. Such cases as this, a few years ago, were treated as pelvic cellulitis or parametritis. Where the pelvic floor was hard and dense, the condition was known as perimetritis or pelvic peritonitis. You can readily understand, however, that we could not have an extensive inflammation of one of these structures without the other being involved, so that we do not have parametritis without perimetritis, or the contrary. By parametritis was meant inflammation of the cellular tissue, while perimetritis indicated inflammation of the peritoneum. It is no longer considered important to make these distinctions, as it is recognized that both of these conditions may arise in the great majority of cases secondary to the disease of the tube or ovary. Disease of the cellular tissue alone, occurring idiopathically, is an exceedingly rare condition.

The importance of correct pathology in such cases must be appreciated, as upon it depends the plan of treatment to which we will subject the patient. If the condition is due to the presence of disease within the tubes or ovaries, the indication would most certainly be to remove the offending member. Such a treatment must necessarily, of course, be a sacrificial one, but in sacrificing such organs we are removing those which are no longer of any special value; they have already been functionally destroyed, and are consequently a source of danger rather than benefit to the patient. It has been objected in those cases in whom there was a marked development of the mass, situated low down in the pelvis and readily reached from the vagina, that the patient should not be subjected to an operation through the abdomen, which will lead probably to the soiling of the peritoneal cavity from the escape of pus into it, when the mass could be reached through the vagina. Thus, in such cases, Coe recommends the following plan of procedure: He would open the mass from the vagina by making, first, a puncture with an aspirator needle, following this with the grooved director, introducing with this a bistoury, making a small opening into which the parallel-bar dilators can be introduced and the opening stretched until the finger can be introduced. With the finger the sac is curetted and broken up, its contents are washed out with a disinfectant solution, and then about a pint of peroxide of hydrogen introduced, in this way destroying the pyogenic membrane and rendering the cavity sterile, when it is packed with iodoform gauze. The objection to this plan of treatment, however, is that we are not always certain that we are able to open and to find a central pus sac; there may be a number of sacs, separated by layers of considerable thickness, and the operation upon one would endanger the patient by the development of most serious trouble. It has seemed to us preferable in such cases to open the abdomen in order to

* Clinic delivered at the Philadelphia Hospital.

make sure through it of the condition and character of the mass removed. Then, too, it is not an impossibility in such a procedure to tear into the peritoneal cavity to permit the pus to escape and increase the danger of subsequent peritonitis.

In this patient, then, we open the abdomen, making an incision in the median line of about two inches in length; introducing two fingers and separating the mass, we find on the right side a pus sac involving the tube and also the ovary, about the size of an orange. The walls of this sac are exceedingly thin, and in tearing it up it has ruptured, as you notice the contents all escape into the peritoneal cavity. We separate the sac as quickly as possible, raise it up, and wash out the cavity to prevent so far as possible the infection of the sutures we introduce. After its ligation with catgut and the removal of the mass we proceed to raise up the other ovary and tube, which are also the seat of an abscess of smaller size than the preceding one; this we are able to remove without rupture. This pedicle is ligated in a similar manner. After irrigating the cavity and sponging it dry, we then take some peroxide of hydrogen, one to three or four of water, and pour it into the cavity, in this way sterilizing and destroying the pus germs that may have escaped. The drainage tube is now inserted, the wound closed with catgut sutures, and dressed with iodoform gauze and antiseptic cotton, held in place by adhesive strips and bandage. We have accomplished this operation without apparently having any marked effect upon the pulse of the patient. Hardly any blood has been lost, and I see no reason why she should not progress normally and recover promptly. The patient will be kept in bed, the shock will be overcome by the application of heat externally, and the drainage tube will be emptied every half hour as long as any fluid can be obtained.

Philadelphia Hospital.

TYPHO-MALARIAL FEVER.*

BY J. W. DUNCAN, M.D.

Typho-malarial fever is a disease about which very little has been written, so far as I have observed. Its name implies that it is a compound disease, therefore its causes must be multiple. The ætiology may be considered under the heads of (1) predisposing and (2) exciting causes. There is perhaps no age at which a person can be said to be exempt from the disease, but the predisposition is greater in childhood and early adult life than in middle life or old age. Seasons have a marked influence in producing an increase or diminution of the fever. It is much more common in summer and autumn than in the winter and spring. Hot weather, in connection with a dry season, will perhaps be attended with an increase of the malady above that of a dry season and low temperature; but the dry weather seems to have more to do in the production of the disease than the heat.

I believe that the poison or agent which produces the typhoid element in the disease is rendered potent by dry weather, whether it be a living germ or not, and that it is rendered innocuous by frequent rains. My observations have been that the disease is more common and severe in those sections where the surface of the earth dries quickly than where the soil is porous.

As regards the malarial element in the disease, I know there have been a number of theories as to its ætiology, yet, so far as I am informed, no chemist has been able to demonstrate the existence of malaria. Yet that which is worth far more to the practitioner than any theory, the fact of its existence from its effect upon the human organism, stands before us, and we cannot deny its entity, although it has baffled the skill of the chemist with all his analytical resources. It is generated in greatest abundance in marshes which contain a high percentage of organic matter, hence the name "marsh miasm." Notwithstanding the above name, it is often observed to manifest itself in quite a variety of soils and climates, and has even been quarried out from its pent-up bed in the granite rocks of Hong Kong. From some observations it does not seem necessary that there be surface moisture to produce the poison, but submoisture even under a very dry surface, especially if the soil be disturbed or thrown up during warm weather,

* Read before the Georgia State Medical Association (by title) April 20, 1892.

or if a forest be removed so as to allow the sun to dry the surface while the substrata are still moist; the noxious agent with such conditions will manifest itself upon the human organism. Decaying matter, heat, and moisture are believed to be in a sense essential in this production of the poison.

We are forced to acknowledge that the elements essential to the production of the toxic agent are found in many parts of the world. I do not claim that the topography, climate, and soil of Georgia are a garden or bed prolific in the generation of the miasmatic germ, but I am fully convinced that there is a sufficient amount of miasmatic poison generated here to produce a toxic influence upon the human system, and whether it manifests itself in intermittent or remittent fever or not, whatever the ailment may be while the system is thus impressed with miasm, periodicity is sure to show itself.

I do not believe that the agent which is capable of producing such curious impress of periodicity as is observed in malarial fevers and the septic agent or bacillus which produces typhoid fever are ever united outside the human system into a compound third agent, capable of producing typho-malarial fever, but the malarial element may exist in the system before the typhoid agent enters, or they may enter simultaneously.

I do not propose to enter into an argument on the nomenclature in this paper. The disease has had quite a variety of synonyms, *e. g.*, "pseudo typhoid," "gastric fever," "nervous remittent," "continued remittent." These and many other names have been applied to the peculiar compound disease which I am trying to describe. Typho-malarial fever is the name which I believe to be most appropriate, and it has been adopted by quite a number of the profession since the late war between the States.

The camp fever of the army of the Potomac was generally recognized as a typho-malarial fever in which the symptoms of typhoid fever, diarrhœa, rose rash, etc., were associated with those of malarial fever. Contagion is supposed to be among its exciting causes by some of the profession and and many of the laity, but I do not believe that it is contagious in the sense that measles, whooping-cough, small-pox, etc., are; but those who are almost constantly in the sick chamber and who are perhaps necessarily exposed to the same zymotic influences which caused the disease in the first case or cases are very likely to succumb to these influences. Yet it must be admitted that the occurrence of any number of cases simultaneously or successively in any house or neighborhood can never prove the fact of contagion.

I am inclined to believe in the spontaneous origin of the disease wherever sanitation is wholly or in part neglected, and notwithstanding the sanitary regulations in our cities and the noble efforts of our city officials to enforce the same, we find dung-hills, animal and human, accumulated, or pent-up sewage, cesspools, contaminated wells, decaying vegetables, poorly constructed basements, damp cellars, and last, but not least, in the heat of summer streets torn up from one to ten feet in depth along many of our populous thoroughfares. These things cause an effluvia to arise and spread over the people, which, if it cannot be felt, can be smelt.

It may be that the electric state of the atmosphere is so modified by these causes that we are called upon to give up a part of our nervous force, and thus our equilibrium is destroyed; but I am inclined to believe that the poisons enter the system by inhalation, absorption, and ingestion, and, having gained admission, the enemy attacks the nervous centers *per se*, especially the sympathetic, and its depressing influence in the great ganglionic system produces the secondary local manifestations as observed in the enlarged, softened, and later on ulcerated solitary glands, enlarged liver and spleen, and these, together with the poisoned nervous centers, bring about the train of constitutional symptoms.

Dr. C. Coleman Benson, of Baltimore, Md., says from observations based upon hypothesis: "I feel assured that the irritation and pathology of all fevers lie in the excessive activity of the large ganglionic cells of the gray matter of the anterior cornua of the spinal cord, and of the cardiac and respiratory centers on the medulla ob-

longata, due to the disturbed electric balance of the sympathetic and spinal nervous system, and that fever or rise of temperature is but a symptom of that nervous condition."

In support of this view he says: "Irrespective of my recent chemical success, temperature is controlled by motor depressants, as aconite, veratrum, quinine, etc., but the effects of the fever are the serious points for treatment and those which generally baffle the practitioner and lead to a fatal issue.

"When the temperature does not exceed 101° F., the disturbance is chiefly in the sympathetic nervous system, and indicates the first stage of irritation in it, and in the cord and centers of the medulla, but when the temperature exceeds 102.5° F., then the sympathetic system has become paralyzed and the arterial circulation is left to the control of the ganglionic centers of the cord and medulla, by which these centers become engorged with blood and paralyzed in their functional action on the muscular and other tissues and glands of the body.

"In this condition the tissues are devitalized, undergo chemical changes of combustion by oxidation which lead to their waste, and when that wasting has reached the point of starvation, then the brain becomes involved and delirium is established."

The diagnosis requires that there shall be present in the case, in a degree, the local and constitutional manifestations of typhoid fever, associated with malaria or periodicity of its leading phenomena. The attack is more often abrupt and more frequently attended with a chill than in simple typhoid. There is greater tendency of biliousness. The temperature in the first week rises higher than in the non-malarial. There is more gastric disturbance and less tendency to delirium than in simple typhoid. There is also a greater tendency to the accumulation of effete material. There is usually less diarrhœa and tympanites than in the unmixed disease. Relapses are more frequent and less severe. There are greater variations in the daily temperature than in typhoid fever. The tongue is more serrated at the edges, and less disposed to be red and more to be coated than in the pure typhoid type.

During the first five or ten days there are periodic remissions and exacerbations, accompanied with coolness of the extremities, and if nothing be used to interrupt these remissions and exacerbations, they may continue throughout the entire course of the disease. The duration of the disease is six weeks. There may be epistaxis during the first or second week, but the hæmorrhage most to be dreaded is from the intestines, which takes place, if at all, late in the disease. I have observed it even after convalescence seemed to be very well established.

The prognosis in consequence of such accidents or complications must be formed or expressed with great caution. The mortality, however, is not as great as in pure typhoid fever. Whether this be due to an antagonistic influence of the two toxic elements on each other or to a more rational therapeutics, it is difficult for me to decide; at any rate, the disease is more amenable to treatment.

Pneumonia occasionally develops in the course of the disease, especially the prostatic variety, and owing to the nervous system being obtunded, the pneumonia may make considerable progress before it is discovered, unless we institute physical examination from slight premonitions of the disease. Inflammation and even suppuration of the parotid glands have been observed in a number of cases, and when the parotid glands are involved there is some danger of a metastasis to the testicles.

When the parotid glands do suppurate, the pus is unhealthy, thin, and ichorous, and is disposed to disseminate itself in the gland and adjacent cellular tissue, and in some cases it is absorbed and carried into the general system, greatly increasing the septic condition.

TREATMENT.—In the early stage of the disease, while there are headache, backache, and aches generally, I like the effect of salicylate of soda, salol, or phenacetin. Quinine acts well in equalizing the circulation and aids in preventing the cold stage, and for this purpose the sulphate or bisulphate may be given in 5- or 10-grain doses once or twice in twenty-four hours; but I am not in favor of using it in large doses with a view to its antipyretic effect, for I have seen pa-

tients deranged for hours by large doses given for this purpose.

Tinct. veratrum viride, tinct. aconite, fl. ex. gelsemium, either one alone or all combined, act well in lowering the temperature in the earlier stages. The coal tar preparations, antifebrin, antipyrin, phenacetin, etc., in small doses repeated *pro ne rata*, have a very decided effect in lowering their temperature, but great caution must be used in their use. I consider phenacetin the least depressing of any that I have used.

Frequent sponging with tepid water is useful and very grateful to the patient. I have used the wet pack in a number of cases with good results. Where there is dryness of the mouth and great thirst, I have used fl. ex. jaborandi with good results.

To revive the action of the liver and improve the secretions generally, mercurials may be used more freely and frequently than in simple typhoid fever, and I believe that the bichloride of mercury, from its antiseptic properties, may be given with a view of accomplishing more than a simple action on the secretant system.

I have given turpentine emulsion very rarely for a number of years. I use turpentine locally over the abdomen in the form of stupes, etc., and believe it to be very useful. I have used the comp. tinct. iodine, carbolic acid, and glycerin in combination. I was well pleased with the results, but later I used with more satisfactory results tinct. iodine, comp. tinct. mur. iron, pure pepsin, cinnamon water, and glycerin. The pepsin aids digestion, while the iron and iodine form a valuable antiseptic tonic and stimulant. I was led to use the above combination in typho-malarial fever from having treated successfully chronic intermittent fever with it. Opiates are often indicated to produce rest and check diarrhœa.

Flushing the bowels once daily with tepid water, from one to two quarts, in which 10 grains of salicylate soda and 60 grains of boric acid have been dissolved, helps to prevent diarrhœa and tympanites.

Where headache is severe, bromo-caffeine acts well, and has a soothing effect on the stomach and nervous system.

Tinct. digitalis improves the action of the kidneys and gives tone to the heart; when the pulse is frequent and feeble, it may be given to increase the force and lessen the frequency.

When tympanites is present, sulphite soda and charcoal, either alone or combined, may be given with great benefit, and enemas containing tinct. asafœtida are beneficial. When alcoholics are used, the purest wines and brandies should be selected. The effect of the stimulant and the condition of the patient should govern us as to the quantity to be given in the twenty-four hours.

Hæmorrhages and other complications should be managed the same as they are in typhoid fever. The diet should be principally fluid, consisting of milk, soup, and meat essences. The patient should be encouraged to take as much nourishment as he can appropriate without inconvenience, as it will sustain his strength and help to prevent the ultimate fatal collapse, which should be guarded against in all asthenic diseases. We should insist upon his having nourishment systematically, if not scientifically. If the patient be rational and expresses a constant desire for any article of diet, his craving may be regarded as a demand of nature, in which case he may be permitted to eat that which is ordinarily interdicted, and will do so if allowed with apparent benefit.

During convalescence I have in some cases given the comp. syrup hypophosphites, and I believe that it has been beneficial. I quote again from C. Coleman Benson. He says: "My specific for all temperatures from 101° to 107° F., and dependent symptoms, is phosphorus, which should be given in temperatures from 99° to 101° in doses of $\frac{1}{150}$ of a grain every hour for six doses, and then every two hours during the day till reduction of temperature to normal. If the temperature vary from 101.5° to 107°, then give $\frac{1}{100}$ of a grain every half hour for four doses, and then every two hours during the day till reduction of temperature to normal, never, however, exceeding in the twenty-four hours ⅓ grain, and even less if epigastric pain be produced by it. The temperature at first will rise slightly, but descend rapidly from 3° to 4°. When the normal temperature has been attained and remained so for twenty-four hours, then give the $\frac{1}{100}$ of a grain with food twice only in the day."

While I admit that phosphorus is a very excellent nerve tonic and stimulant, acting on the circulation through the nervous system, causing the pulse to be fuller and more frequent, disturbing the capillaries, until free perspiration follows, and from its primary action increasing the heat of the surface of the body slightly, its secondary effect lowers temperature. It accelerates cell growth in the body. It acts as a diuretic. The urates and urea are greatly increased in the urine. Yet I do not think it should be considered a specific for fevers. It may act well as an auxiliary in the management of some cases, and doubtless it does. But I think that antiseptics should form the basis of treatment in all cases which have sepsis as the exciting cause. While it may not play an important part in causing the fever under consideration, it does serve as a *materies morbi* in many cases of sickness attended with high temperatures.

We should not allow ourselves to be led astray by hobbies and specifics, so-called, but should try to meet the indications in each individual case. It is well known that pyrexia results from various causes; therefore we should select our remedies with the view of removing the cause as well as relieving the symptoms. The disease under consideration, as well as many others, is classed as self-limited, therefore it is claimed that as nothing can be done to shorten the duration, we can only use placebos and look wise, and wait for the *vis medicatrix naturæ* to do the rest. But I believe the time will come when many of the so-called self-limited diseases will be greatly abridged, if not aborted. It is well known from clinical experience that pneumonia has often been cut short in the first stage, and I believe that remedies can be used in typho-malarial fever that will very much aid in the elimination of the poisons from the system, if not in some degree neutralize them.

Our object in every case and class of disease should be to aid nature. Every person who is exposed to the bacilli of typhoid and the miasm of malaria does not succumb to them; but Nature, ever true to herself, neutralizes, eliminates, and subjugates them, and man, the grandest being on earth, moves on notwithstanding the pestilence.

Atlanta, Ga.

SANTA FE (THE HOLY FAITH), NEW MEXICO AS A SANITARIUM.*

BY HENRY F. LYSTER, M.D.

This oldest of American cities, with the exception of St. Augustine, Florida, is nestled in the Rocky Mountains, in the Territory of New Mexico, in the northern portion of an elevated valley, 7,015 feet above the sea.

Singularly enough, these are to-day the two cities of this continent which stand out conspicuously as health resorts.

Florida is well adapted as a winter resort for many cases of irritative bronchitis, where the lung tissue has not been invaded by inflammatory deposits, and also for laryngeal inflammations, but it has never been a safe place to send invalids who have inflammatory infiltrations of the lungs, whether tubercular or non-tubercular in character. Those cases not infrequently soften and break down and form cavities in the lungs with great rapidity, as they do in those who visit the West Indies and other warm, moist climates.

Southern physicians were accustomed, as is noticed in Blodgett's work on Climates of the United States, published about 1844, to recommend to their incipient consumptive patients the northern regions of Michigan and the upper Great Lakes for a lengthened residence.

While, as a rule, cases of the character above mentioned should seek a warm, dry winter and a dry summer climate in an elevated region, it is an accepted fact that many persons have been cured in the warm and moist air and lower altitude of the South. There are so very many reasons why this should be so that it is hardly necessary to allude to, among others, change of occupation and scene, life in the open air, exercise out of doors, as important factors in producing improvement in hundreds of patients.

The conditions which give a marked preference to the elevated mountain valleys of Colorado, New Mexico, and portions of Arizona are the warmth and dryness of the winter seasons, the elevation varying between 5,000 and 10,000 feet above the sea, and the agreeable coolness of the nights in summer.

*Read before the Michigan State Medical Association.

This country, well represented by the old Indian and Mexican city of Santa Fé, is an all-the-year climate for invalids, and it is desirable to make them aware of the fact. It is not necessarily the pulmonary cases alone that might go there with benefit and with, in numerous instances, bright prospects of permanent cure, but persons who have chronic malaria, dyspepsia, heart disease with good compensation, Bright's disease, general debility, chlorosis, anæmia, nervous exhaustion, alcoholic habits, ennui, functional and incipient or limited organic disease of the liver, with or without moderate jaundice and dropsy—all of these conditions will find here the road to a possible cure, and in many cases it will lead to the most satisfactory results.

Santa Fé possesses a multitude of conditions which favor its selection as a health resort for all the seasons of the year.

It lies in an elevated valley among the foot-hills of the adjacent Rocky Mountains. The mountains rise to the north and east and west, and the valley slants toward the south for 30 miles, where it reaches mountains and high table-lands at the Ortiz and Los Cerrillos. On the west a ridge divides the valley of the Santa Fé from that of the Rio Grandè, a few miles away. It will be seen from this that invalids are protected there from the winds from the east and north and west. The winds from any and every direction must go over or around, being diverted by the mountain ranges. It is this fact—that the February and March east winds are prevented by the mountains to a considerable degree—that determines those acquainted to try it.

The sun, as a rule, shines very brightly almost every day, and all day long, the whole year round. The following meteorological statement is from the U. S. local weather service for the year 1891:

Average temperature	47.3° F.
Average relative humidity	51.3° F.
Average velocity winds, miles per hour.	7.3
Total rainfall, inches	16.73
Number of cloudless days	195
Number of fair days	107
Number of cloudy days, where more than one-fourth the heavens are cloudy	63
Annual mean temperature, 1891	47.3° F.
January monthly mean	28.3° F.
February	31.7
March	39.1
April	45.5
May	56.0
June	65.4
July	68.0
August	65.9
October	49.4
November	36.7
December	40.2

One year does not vary from another to any great degree. While the other seasons are so relatively bright and charming, the summer and autumn are universally commended by those who have been here for many years. The days are not too hot, and the nights are cool enough to require a blanket on the bed.

Most charming views abound in every direction. The Pueblo Indians have one of their peculiar adobe towns, called Tesuque, within ten miles, over toward the Rio Grandè. Beautiful cañons in the mountains and mountain drives are on all sides. The Santa Fé river, or brook, runs rapidly over its rocky bed, with banks on either side far away from the little stream, showing that sometimes a rain storm in the mountains, or suddenly melting snows, turn it into a rushing torrent. The walls of granite and flint, and many other of the hard fire-rocks upon its sides, show in the cañon of the Santa Fé what, in cycles of years, may be done by water power.

A mineral spring lies up the cañon about three miles, a delightful drive. The analysis by the Smithsonian Institution is herewith given.

In 1,000 parts of water:

Silica	0.2200
Calcium carbonate	1.5380
Magnesium	0.6050
Calcium sulphate	0.0500
Sodium sulphate	0.2250
Sodium chloride	0.1930
Total solids	2.8310

parts, with enough free carbonic acid to retain the carbonates of calcium and magnesium in solution as bi-carbonates.

This soft and very pure water is admirably adapted to persons with dyspepsia and liver and kidney diseases.

The "Colorado Carlsbad" may be given for functional and organic digestive diseases, also to cases of Bright's disease.

This spring is in the immediate vicinity of Denver, and is an extremely agreeable and efficacious diuretic, and mild laxative.

The following is the analysis:

	Total in 1 gallon.
Sodium sulphate	64.536 grains.
Sodium chloride	11.336 "
Calcium sulphate	27.912 "
Calcium carbonate	22.264 "
Magnesium sulphate	11.308 "
Ferrum et aluminum et silica	traces
Total solids	117.5 grains.

1.47 parts in 1,000.

A camping-out party leaves Sante Fé early in July for a couple of months' trip into the mountains and pine forests and high valleys of northern New Mexico. The party consists of ladies and gentlemen, accompanied by a physician as captain and guide. The party is mounted on mules, and a pack train of mules, with provisions and tents and camp supplies, accompanies it. They live out in the open air in this way all summer. Game is obtained in greater or less quantity, and brook trout abound in the clear mountain streams.

At Buchtahrt, in the Thuringian pine woods in Germany, up on the mountains, there are summer stations open all the time, with shutters to let down in winds and storms. These are for pulmonary cases chiefly, to enable them to live outdoors. Large numbers derive benefit by this means, and yet there is no comparison between the humid climate of Germany and the dry air of New Mexico as a means of cure in those cases.

Marked improvement, in digestion and constitutional weight and strength of those belonging to the tent hospital, has been the general result in previous campings.

I have reserved for the last the best features of this region. There is perfect quiet there; there are no factories; the railroad depots are outside the residence portion of the city. There are no pavements; none are needed. An occasional bray of a burro (donkey) breaks in upon the quiet stillmess of the air, or the bugle call at Fort Marcy, or the regimental band in the afternoon on the plaza, or the harmonious and social bells of the beautiful cathedral are heard in quiet melody, and without any quarreling and jangling with neighboring parishes.

Then there is the Sanitarium of St. Vincent, under the management of the good Sisters of Charity, from Cincinnati, a lovely hotel for invalids, where it is a pleasure to get well, and where, if fated to die, death would be robbed of half his terrors, in the presence of such faith and works and the beautiful sunshine. To those who have, in hunting for winter sunbeams and cool summer days and nights, passed from hotel to hotel in their several routes, and have noticed the missing link between cost and comfort—the poached egg, as it were, on a cold plate, the ventilated toast, the copper-tasting tea—will here find all that they have desired, and more than they have deserved for the price demanded.

St. Vincent's Sanitarium is an oasis in the desert of houses of entertainment for invalids, and is only one of the many good works in the care of the Sisters of Charity. A large hospital, a school, and an orphanage near by attest their energy and devotedness to the work of the Master whom they serve.

The effect of the whole range of the Rocky Mountain country upon the health of persons going there from malarial regions and the lower altitudes of the east and south has not been generally known or studied.

I am convinced that we have a very potent influence, in the elevation or altitude, upon all who visit it. This is noticed in the marked improvement of the circulation and color of those residing but a short time at an elevation of from five thousand to eight thousand feet above the ocean.

The circulation of the liver is markedly increased, as shown by the removal of the jaundiced appearance of the conjunctiva and of the skin, so frequently accompanying it.

The destructive action upon the red blood corpuscles, and consequent rapid anæmia, which is present when passive hyperæmia or torpidity of the liver exists, and which is shown by the coloring matter of the blood in the high-colored urine, gives place to their rapid formation upon the improved circulation. The oxidation of uric acid in the blood is promoted, and the lateritious sediment, or red deposit, so constantly observed in the urine of those who suffer from malarial tox-

æmia, diminishes, and as the circulation of the liver becomes accelerated, disappears, giving place to a clear amber urine of normal specific gravity, and one which remains clear upon standing in a cool place.

These changes are enhanced by the use of the warm bath every two or three days, in addition to the exhibition of cholagogue remedies and tonics.

In the laudable endeavor to prevent the formation of the deleterious habit of the daily use of cathartic medicine, it is a fact that we lose the opportunity of relieving cases where torpid livers are present, and where malaria exists. The use of cholagogues, notably aloes, in connection with podophyllin and with hyoscyamus and capsicum to prevent pain, should be advised at bed-time; some soft, slightly alkaline water may be used in the morning and throughout the twenty-four hours, in such quantity as may be desired, to flush the kidneys and promote a laxative action to the extent of two operations in each day. Tonics and anti-malarial remedies, such as iron, quinine, arsenic, should also be given in connection with a good, generous diet and plenty of out-door air, the patient walking, riding, or driving, according to taste or opportunity.

Until quite recently we have not possessed the transportation or railroad facilities which would offer the best conveniences for travel, but now we have all of those represented by a large number of first-class railroads, which rival each other in reaching the most desirable places all through the West. Old Mexico is now reached by the Mexican Central and its branches, so that now that incomparable winter climate is attainable for tourists and invalids. We have, in Mexico, a warm, dry, winter climate, a country protected from northers by the high and extensive chains of the Sierra Nevada and Rocky Mountains. We also have the high, dry, central upland valleys, free from malaria, affording all the advantages of warmth and protection from cold and sudden changes, and those benefits which obtain from an elevation varying from four to eight thousand feet above the sea, with foot-hills and mountain ranges of a much greater altitude. We possess a sanitarium in the West and in Mexico which is in many respects superior to that of Italy and south of France, in the freedom from malaria, the immunity from hot or cold winds, and the decidedly increased elevation.

While we have all the delight of visiting new and strange countries, and observing the civilization and customs of these primitive people, as represented by the Mexicans and Indians, there are still existing the discomforts of American hotels, which, to invalids who, from inability are not able to readily look about them for the purpose of improving their residence, are almost insupportable.

How the memory reverts to the quiet, little German inns, unpretentious, cheap, clean, and with well-served and deliciously cooked meals, the whole establishment in keeping with the picturesque surroundings!

The time will come when the pleasure and agreeableness of invalidism will be greatly enhanced, and the cure by change of residence and climate in this country will become popularized.

The constant moving on and spirit of restlessness which pervades the tourist is not conducive to the best results, but a spot should be chosen, and the patient remain some time as an actual resident, in this way becoming acquainted with the objects of interest in the neighborhood, as well as with a number of the residents of the place.

Detroit.

THE REST CURE—THE CASES SELECTED—METHODS OF TREATMENT.*

BY L. J. BELKNAP.

The above method of treatment consists in putting in bed, for variable lengths of time, certain chronic cases, described below; together with a carefully-regulated diet, massage, electricity, manual Swedish movements, etc. To S. Weir Mitchell belongs the honor of bringing before the medical profession the value of this system of treatment. At the Alma Sanitarium, the past two years, we have demonstrated its value in many cases, and at the present time have a number under treatment.

In the selection of cases which are bene-

* Read before the Michigan State Medical Association.

fited by this method of treatment we have a wide field, the dimensions of which are rapidly broadening as each succeeding year adds its scores and thousands of chronic invalids, the result of influenza, many of whom are suffering with some form of nervous affliction, ranging from neuralgia, or neuritis, to insanity.

To the above may be added nervous prostration, nervous exhaustion, many forms of spinal disease, as meningitis, myelitis, early stages of tabes, etc., produced by other causes than influenza. We have treated a number of cases of extreme dyspepsia very successfully. A few cases of anæmia, more or less obstinate, have been subjected to this form of treatment, and have yielded quite readily, after other means had failed.

Among cases of insomnia there are many which will respond more readily to this treatment than any other I have been able to find.

TREATMENT.

We always aim to select rooms into which the sun will shine several hours during the day, or, if this is not possible, the patient is daily wheeled out on to a veranda in some quiet spot, where sun and fresh air can be enjoyed. We do not find it necessary, in every case, to confine the patient to full rest, but vary it, according to the case, from a few hours each day to confinement in bed from four to eight weeks, six weeks being the average time. I recall one case which we kept in bed nearly five months, with a gain of thirty-five pounds of good healthy tissue and corresponding gain in general health.

In some extremely weak and nervous cases, as nervous exhaustion, we isolate the patient from family and friends, permitting nobody to enter the room except the attending physician and the nurse. This, at the outset, seems rather like harsh treatment, yet after a few days they become less nervous and settle down quietly and contentedly, and go on through the course of treatment with little or no further trouble.

An eminent authority has said each case of neurasthenia is a study of itself. If two cases are treated precisely alike in all details from beginning to end, it is probable that one of them is treated wrong.

Though this is true, there are certain fundamental principles we follow in each case.

While rest is an essential factor in this method of treatment, there are many auxiliaries to be taken into account.

The diet calls for no little attention, and we have found that patients do better by beginning on very simple diet, as we would with a child. Sterilized, not boiled, milk gives the best results. We seldom give the milk clear, as experience has taught us that it agrees much better, in most cases, where it is used as an exclusive article of diet, when a tablespoonful of lime-water, barley-water, water, coffee, or some such article is added to a glass of milk. This not only makes it more palatable, but aids in the digestion, the milk forming, in the stomach, a flocculent precipitate rather than coagulating *en masse*. After a few days we add meat broths and gruels, especially gluten gruel, and finally solid food and fruits are added, eggs being the staple article. At the outset we give food once in two or three hours, gradually extending the time to three or four times a day.

Massage is given from the start, beginning with light manipulations the first few days, and gradually extending the time up to a full hour for each treatment, it usually being given in the forenoon, midway between meals. In exceptional cases massage is given twice a day.

To give you a definite idea of massage without actual demonstration is not an easy task, and I cannot give you a more brief or better description than that given by Dr. Mitchell, in his valuable little work on "Fat and Blood," which reads as follows. "The manipulator starts at the feet, and gently but firmly seizes the skin, rolling it lightly between his fingers and going carefully over the whole foot; then the toes are bent and moved about in every direction, and next, with the thumbs and fingers, the little muscles of the foot are kneaded more largely, and the inter-osseous groups worked at with the finger-tips, between the bones. At last the whole tissues of the foot are seized with both hands, and somewhat firmly rolled about. Next the ankles are dealt with in like fashion, all the crevices between the

articulating bones being sought out and kneaded, while the joint is put in every possible position. The leg is next treated, first as to the skin, then by deeper grasping of the areolar tissue, and last by industrious and more profound kneading of the large muscular masses, which, for this purpose, are put in a position of the utmost relaxation. The grasp of the muscles should be firm, and for the large muscles of the calf and thigh both hands should act together, the masses of muscle being, as it were, twisted around the bone, while the hands alternately contract upon them. In treating the firm muscles in front of the leg, the fingers of the two thumbs are made to roll the muscle under the cushions of the finger-tips. At brief intervals the manipulator seizes the limb in both hands, and tightly runs the grasp upwards, so as to favor the flow of venous blood-currents, and then returns to the kneading of the muscles.

"The same process is carried on in every part of the body and especial care is given to the muscles of the loins and spine, while usually the face is not touched. The abdomen is first treated by kneading the skin, then, by deeply grasping and rolling the muscular walls in the hands, and, at last, the entire belly is kneaded with the heel of the hand in a succession of rapid, deep movements, passing around in the direction of the colon, while somewhat later the whole belly, relaxed by position, may be shaken by rapid motion of the grasping hands."

I would further add that it is very difficult to find a masseur or masseuse who has the requisite judgment and skill to perform the work scientifically, even after much experience. There are scores of nurses who claim to be able to administer massage, but, upon an examination, we find them entirely unqualified for the work. Pinching here and there in a rough and unsystematic manner, giving no attention to the course of the circulation or facial expression of the patient, is quite common; and thus, instead of leaving the patient at the end of an hour's treatment ready for a good sleep, he is left exhausted and nervous, sleep being impossible. With such treatment we cannot expect to succeed, any more than we could expect good results from our prescriptions sent to the druggist, if they were compounded by an incompetent pharmacist.

I shall not attempt a description of Manual Swedish Movements more than to say it is a system of manual exercise in which every available joint and muscle in the body is manipulated and exercised, consisting of over three thousand positions and movements. This is administered more especially in the latter part of the treatment, and prepares the patient for walking. The only complete work upon this subject is written in the Swedish language by T. J. Hortelius, of Stockholm, entitled, "Sjukgymnastik" (Gymnastics for the Sick).

Electricity is given daily in the form of special general faradization, each séance lasting an hour, given in the after part of the day.

To the above treatment used by Dr. Mitchell I have added fomentations to the stomach and liver, in cases of dyspepsia, with good results. In nervous and spinal affections the spine bottle gives admirable results, being applied to the spine an hour at a time, acting as a general sedative and nutrient tonic to the cord.

Breathing exercises are conducted at intervals during the day with good results.

For the treatment of cases suffering from insomnia, resulting from cerebral anæmia, I had constructed a copper cap, for the application of heat to the head, six inches deep, with one-half inch space over the entire surface, for hot water, and large enough to come down over the head, which is protected from the sides of the cap by a Turkish towel. In every case in which I have used it, it has succeeded in producing sleep in a few minutes after it was put on. In from five to eight minutes the pulsation of the temporal artery could be readily counted. When necessary, I use the cap two or three times during twenty-four hours, keeping it on from fifteen to thirty minutes. Natural sleep, added to the other treatment, soon brings about a radical change in the condition of the patient.

Under this treatment many of the above cases, of years' standing, will take on from five to thirty pounds of flesh, and regain to a large degree their former health.

We do not claim for this system of treat-

ment a cure-all, but we do claim for it, when properly carried out, success in many cases where, apparently, every other form of treatment has failed.

Alma, Mich.

A PATIENT'S RECORD IN ABDOMINAL SECTION—RECTO-VAGINAL FISTULA—VAGINAL CICATRIX CAUSING LATERO-VERSION OF UTERUS—GONORRHŒA IN THE FEMALE.

BY THEOPHILUS PARVIN, M. D.

Five Abdominal Sections Upon the Same Subject.—The patient now presented has been the subject of five laparotomies, and now would be quite willing to have a sixth done! Not long ago a distinguished New York clergyman remarked that Philadelphia was the paradise of mediocrity. Doubtless he referred only to those of his own profession; he could not have had in his mind Philadelphia lawyers and doctors, or else he was suffering from that occasionally occurring disease, "Manhattan myopia." But whether this city is the paradise of mediocrity or not, it certainly does deserve, in view of these five laparotomies upon one woman—not only the laparotomized, but all the laparotomists still living—to be called the paradise of laparotomy. Undoubtedly these operations were skillfully performed, else the patient were not here to show her scars and to tell her story.

Nevertheless, in spite of these brilliant sections, she still has pain. Now pain is one of the intangible, invisible, immeasurable things or conditions. As the heart knoweth his own bitterness, so each individual with physical suffering knows that such suffering is real, and knows whether it is great or small. Nevertheless, though real, it may be intensified by constant attention, and a pain grows by constantly observing it. So, too, a desire for assiduous care on the part of doctors and nurses, and of kind sympathy, thus making oneself a centre around which others revolve, may be intense in the weak and sick as well as it sometimes is in the strong and healthy in their struggle for pre-eminence, for the latter want to be centres of power and influence. On the other hand, a pain more or less severe may be mitigated or abolished by diverting the mind from it, by giving new occupation for the thoughts; not only "the labor we delight in physics pain," as Shakspeare taught, but simply having the thoughts flow in a new channel, having a new object of attention independently of all work, will have a similar effect. Just in proportion to the mental development, I think, will be the facility of cure through such means.

I ought to have told you that this patient does not locate the suffering in the vicinity of the uterus, but more in the course of the transverse colon, and hence I see no possible explanation of it by supposing that it is consequent upon adhesions or compression from ligatures in connection with the repeated operations she has undergone.

A treatment sometimes curing such pain is the injection of from one-half to a drachm of hot water in the tissues adjacent to the painful part, here in the connective tissue of the abdominal wall. This may be tried, though it is better that such a patient should not know the means employed, else she might be so sceptical as to its value that no good would come; a condition of mental antagonism to a remedy or to a physician may oppose and prevent a cure.

A Case of Recto-Vaginal Fistula.—This patient has an opening from the rectum into the vagina, situated about one inch above the anus. She attributes it to lifting a very heavy weight. Such fistulæ generally have their origin in injury during childbirth, not so often caused by improper use of instruments as by an impacted head and delayed delivery, pressure producing death and a subsequent sloughing of a portion of the recto-vaginal wall. The next most frequent cause of these lesions is syphilitic ulceration, and such cases are not readily cured by one operation. Dr. Lees has carefully inquired into this possible origin, and can find nothing in the history of the case nor in the character of the opening to justify the opinion that it has a specific origin. Nevertheless the cause to which the patient attributes it seems very improbable.

While the patient is being etherized, a word or two as to the operation. I have not

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examined the fistula with sufficient care to know what will be the best method of operating, deferring that examination, because of the great sensibility, until complete anæsthesia. But, if possible, I should like to operate without removing any of the tissue; if I can, I will split the recto-vaginal wall in the middle of the fistulous margin, thus making two flaps—one rectal, the other vaginal; then the rectal flap will be stitched with catgut, after which the vaginal wall will be united with silkworm gut. By this method broader surfaces for adhesion are secured, and the double series of stitches will hold the parts firmly together until such union is accomplished; besides, a matter of importance according to some, there will be no stitches passing from the rectum to the vagina, and thus one source of possible infection may be avoided. If this method be impossible, I shall simply make with scissors a beveled denudation from the vaginal toward the rectal opening, endeavoring in this freshening of the tissues to "cut out the hole"; that is, to have a complete circle removed, thus making it certain that there are no islands of unfreshened surface. The patient is now upon the operating table, her hips brought to its lower end, and two assistants hold the lower limbs, the thighs well flexed upon the abdomen, and the legs upon the thighs. The external genitals will be first thoroughly washed with soap and warm water, then with a three-per-cent. solution of carbolic acid, and next a similar solution is used for irrigating the vagina and the fistula. Were it not that creolin makes with water an opaque, milk-like mixture, thus it may be hiding or partially concealing parts which you wish to see clearly, it would be preferable to the carbolic acid solution, for when your fingers are exposed to its action, even for twenty or thirty minutes, they become numb. One of my assistants at the Jefferson Medical College Hospital has been experimenting as to the germicidal power of carbolic acid, boracic acid, lysol, and creolin, and the results are that, using equal percentages, the last is the most efficient. Some time ago I first used a creolin mixture to wash out the bladder with in cystitis, and recently I have been trying whether lysol might not be similarly employed with equally good results, but clinical experience has not confirmed this opinion, and thus such experience coincides with the results of laboratory experiments, giving them additional value.

The examination of the fistula now made shows that the rectal wall is very thin, and the splitting operation is hence impossible; therefore the margins of the fistula will be cut away, this denudation being made from the vagina. The lateral retractors used fairly expose the fistula; but let me say a word as to how they are to be held, by illustrating from two cases recently under my charge how they ought not to be used. The other day, after operating for a vesico-vaginal fistula, denuding and closing the freshened surfaces, I was surprised to find quite a hæmorrhage from the vagina, and upon seeking its source I found a raw, bleeding surface some distance from the fistula and at one side of the vagina; the surface was immediately stitched with catgut, and the bleeding thus stopped. The part had been torn by the end of the blade being turned in, instead of simply resting evenly upon the surface. In another patient operated upon some weeks ago, the curette and an intra-uterine injection being employed, I found some weeks after the operation great tenderness in the ischio-pubic ramus of the left side, especially when pressure was made from the vagina; the explanation plainly was that the assistant who held the retractor upon that side had pulled too strongly, and thus produced temporary injury of the periosteum corresponding with the part of the ischio-pubic ramus subjected to such severe pressure. The parts should be only fairly exposed; all pulling upon the handle of the retractor may cause injury with the blade. These cases are mentioned so that you may avoid similar accidents. If all professional errors and failures were candidly reported, their repetition by others would be less frequent.

After paring the margins of the fistula, they are stitched together with silkworm gut; you observe that the sutures used are much thinner, the material much less thick, than that commonly employed, and hence two advantages, namely, a larger number of stitches, thus securing perfect apposition, can be used, and the cut ends of the sutures, being much more flexible, do not

cause the irritation which may result if the thick gut were introduced.

I believe the operation will succeed if the stitches hold well, do not cut out, and if proper care be taken in the after-treatment.

Vaginal Cicatrix Causing Latero-Version of the Uterus.—The patient now before you, and anæsthetized for operation, has a broad cicatrix extending from the vaginal cervix to the vaginal wall, on the left side. The uterus is by this contracted tissue drawn, so far as the cervix is concerned, toward the left side, while the body and the fundus are consequently turned to the right. A woman's womb is not the errant organ, wandering at its own sweet will in the abdominal cavity, that the ancients, Aretæus,* for example, thought it was—indeed, in Shakspeare's "King Lear" there is a passage † which seems to me to indicate faith in wide excursions of this organ—but nature never intended it should be tightly tethered to the side of the pelvis as this one is, and therefore it must be set free. This cicatrix I suppose resulted from injury in childbirth. To get rid of its evil consequence, that is, to liberate the uterus, is very easy, nothing but simple division of the band with scissors or knife. But in a short time the incision would heal with similar tissue, and the last state, if not worse, would be no better than the first. Absorption of the cicatricial tissue cannot be accomplished by local applications or by pressure. In order to accomplish a permanent cure the new tissue must be cut loose from the uterus, and no chance given it to "catch on," using a familiar expression to make the thought plain. I now simply cut the cicatrix close to the cervix, and then unite the raw surface thus made upon the latter with sutures, drawing the margins of the cut together, and thus there can be no reunion of the cicatricial formation with the uterus, for there is no place for such connection to be made. You see how normally mobile the uterus has been made.

The hour has nearly ended, but I cannot close my first lecture this winter to you, the ninth year of my lecturing in the Philadelphia Hospital, without expressing the hope that our weekly meetings may be profitable and pleasant. Let them be profitable in the acquisition of useful, practical knowledge, and in helping you to appreciate that noble ideal of professional life which most medical students entertain. Only by having a noble ideal can you attain to noble living. Do you not remember the fable of Ixion, who, mistaking a cloud for Juno, begot the Centaurs, and that Plutarch suggests that the story was invented to represent ambitious men, whose minds doting on glory, which is a mere image of virtue, produce nothing that is genuine or uniform, but only, as might be expected of such a conjunction, misshapen and unnatural actions? The story of Ixion is too often repeated, not only by the avaricious doctor whose greed for gain outruns his glory in doing good, but by many young men who, impatient of the slow rewards of honest industry and years of laborious toil, wish to at once make themselves prominent, and, if they cannot be famous, will at least be notorious. Hence are produced misshapen thoughts and actions that benefit neither people nor profession; these are deviations from the straight and narrow path of professional honor and integrity. If we make doing good, and not the attainment of wealth, the chief object of our lives, each of us will be successful, and the world will be better for our having lived in it; while it is seldom that he who has inherited or acquired great possessions, whether doctor or layman, devotes any considerable part of such possessions to the benefit of humanity, but he usually keeps on

* In Adams' translation of the works of Aretæus, the following passage is found: "In the middle of the flanks of a woman lies the womb, a female viscus closely resembling an animal, for it is moved of itself hither and thither in the flanks, also upwards in a direct line to below the cartilage of the thorax, and also obliquely to the right or left, either to the liver or spleen; and it is likewise subject to prolapsus downwards—in a word, it is altogether erratic; it delights also in fragrant smells, and advances towards them; and it has an aversion to fœtid smells, and flees from them, and on the whole it is like an animal within an animal."

† "O, how this mother swells up toward my heart!
Hysterica passio! Down, thou climbing sorrow,
Thy element's below!"

In Johnson's dictionary, one of the definitions of mother is "hysterical passion;" so called as being imagined peculiar to women.

grasping after more until death deprives him of all. How often a remark, said to have been made by Samuel Johnson, comes to my mind: "It is easy to see how little the Lord thinks of money when you observe the sort of people whom he lets have it." When will rich men have such quickened consciences that they will realize they are responsible for wise, benevolent, and beneficent use of their money, and their own happiness will be best secured by increasing the means for relieving human suffering. Pardon these utterances. They come from a free heart and with a sincere desire that they may do good to some of you.

My hour has ended, but I am told that the gentleman whose hour has now come has not himself appeared, and therefore I will occupy at least a part of the time, and have another patient presented. This patient was only recently admitted, and, from inquiries addressed her upon admission, the resident physician, Dr. Lees, concluded that she had gonorrhœa—a conclusion, however, which he found upon making an examination was erroneous. This woman is 19 years old, has been married two years, and still lives with her husband; she had a child a year ago, and it lived only six months. One month after its birth menstruation returned, and the flow has been excessive. Five weeks ago she states that a profuse white discharge began, temporarily checked by some medicine a doctor gave her, but soon returning as abundantly as at first. In addition there is evidence of there having been an abscess of the left vulvo-vaginal gland. The uterus is somewhat larger than normal, slightly retroverted, and about the os (from which an opaque discharge is issuing) there is a dark red circle; apparently, too, slight erosion. There is no urethritis. She has menorrhagia and uterine catarrh resulting from endometritis; at our next meeting I will employ the curette and an intra-uterine injection of a solution of one of the iron salts.

The fact of inflammation of the vulvo-vaginal gland in connection with an abundant discharge from the sexual organs would render the hypothesis of gonorrhœa probable; but the color of the discharge, and especially the absence of urethral inflammation, at once put a negation to this view. Martineau, in his lectures upon blenorrhagia, states that in two thousand cases of gonorrhœa in women examined by him he did not find urethritis absent in a single one. The importance of making a correct diagnosis of gonorrhœa in the female cannot be exaggerated, and the presence of urethral inflammation in connection with vulvitis and vaginitis is almost certain proof of the specific origin of the latter. The danger of gonorrhœa extending from the vagina to the uterus, and thence to the oviducts, sometimes (often, it may be) working such fearful mischief to the last that their extirpation is necessary, is so great that early recognition of the disease and its prompt and thorough treatment are imperative. It is probable that three-fourths of the abdominal sections now done for diseased tubes would be at an end if licentiousness were to cease. The wild oats that young men too often think they can sow with impunity, imagining that they will never be required to reap and to eat the black harvest such sowing inevitably brings, may produce sickness and sorrow in many a home. The wives of these young men may bear the suffering of their sins, and become sterilized by the diseases communicated to them by their husbands, or by the operations such disease may require. In some instances syphilis is not as perilous a disease in the case of women as gonorrhœa is. The cultivation of virtue on the part of man is the certain remedy for some of the ills which affect the male, but more gravely the female. Do not regard these as idle words, but take the truth they convey as guidance for action and instruction. The profession to which you belong or aspire has as one of its highest functions the improvement of the race, and disease often has moral lessons of the greatest value, and you are the interpreters and teachers.

A pleasant fiction would sometimes attribute a urethritis in the male to a simple leucorrhœa or to the menstrual flow of wife, mistress, or prostitute; but, as a French surgeon has said, a woman cannot give that which she has not—always and forever gonorrhœa is caused by gonorrhœa, and it is a much more obstinate disorder in the female than in the male, oftener apparently more than really cured, and lingering for months

and even years, latent for a time, and then, under the stimulus of cotion, of exercise, or of certain beverages, asserting its original virulence. Virtuous lives, and those only, I believe, will insure the final stamping out of the disease.

But I must not prolong this conference, for I have been talking some minutes upon a disease from which the patient is not suffering, and in reference to this point allow me to conclude with a story relating to Coleridge, the application of which you can readily make. At a dinner party the great poet, philosopher, and conversationalist had entertained the guests with a monologue upon war, saying, as he ended his remarks, that he had been led into that train of thought by meeting two soldiers just returned from the Peninsular war as he was on his way to the house of the host. Horne-Tooke at once turned to his neighbor at the table and whispered: "If Coleridge talked two hours from meeting two soldiers, how long would he have talked if he had met with a regiment?"

STATE KEELEYISM.

The wholesale and compulsory treatment of dipsomaniacs is a political issue in Iowa. Regarding this unique development the Medical Record says:

"Civilization is advancing with a whoop in the happy, golden State of Iowa. Having tried to prohibit the use of alcohol, with some lack of success, it proposes to take up the other end and cure by State enactment all its victims. If the good citizens cannot kill the roots, they will pluck the fruit and extract its poison. A bill has been introduced into the State Legislature to create County Boards of Dipsomania. They will have the power to see that all inebriates are treated and cured of their unfortunate infirmity. They are to be taken and placed in institutions where the county or the patient, as the case may be, shall pay $25 a week till the thirst for strong drink has passed away."

Inebriates the country over, whose means do not allow of the luxury of $25 Gold Cures, will watch the progress and mark the fate of this measure with interest.

The Medical Age.

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Editorial.

A NEW, SAFE METHOD OF ADMINISTERING TOXIC MEDICAMENTS.

The increased knowledge resulting from research in the fields of botany, chemistry, physiology, pharmacy, and materia medica has created a demand on the part of the medical profession for the essential or active principles of drugs in preference to the more cumbersome, less definite pharmaceutical preparations which custom and authority have so long sanctioned.

Not a few alkaloidal principles of drugs have been isolated, and are now frequently prescribed. The conservative element of the profession have, however, in view of the toxicity of certain isolated medicinal principles and the acknowledged variety of strength and activity of products of this character of different manufacture, been loath to employ them when indicated.

The doses sometimes being fractions of a thousandth or a hundredth, it is not possible for the physician to always bear them in mind, and in prescribing he is often in doubt as to what constitutes the proper therapeutic dose, and what the dangerous toxic one.

Dr. E. Trouette, in a paper read before the Paris Academy of Medicine, and published in the Revue de Thérapeutique, entitled "Duodecimal Doses of Toxic Medicaments," proposes a method of obviating the difficulties hitherto preventing the general use of many valuable medicinal principles. The plan he proposes is a new method of posology based on the division of the maximum daily dose which may be given to an adult in twenty-four hours.

The advantages claimed for this method are: First, accidental poisoning need no

longer be feared; second, dangerous medicaments may from the outset be given in efficient doses without the least risk.

Dr. Trouette suggests that all toxic medicaments be so divided that the maximum dose to be given an adult in twenty-four hours shall be separated into twelve doses. The physician, by this method, will no longer have to exert his memory to recall the maximum dose of any medicament.

The division by twelve possesses the advantage of permitting all manner of combination without effort of calculation.

The most conscientious physician may have a slip of memory or commit a *lapsus calami*. With the duodecimal method error is impossible. It is simply necessary to recall the number twelve, whatever may be the medicament.

The maximum dose may be prescribed, or a half dose, or a quarter dose, in accordance with the effect desired and the age and temperament of the patient.

The proposed method is especially recommended only for medicaments which are actively toxic, and it would in no wise interfere with the art of compounding.

In the belief that this method would afford a most convenient way of prescribing certain medicaments, Parke, Davis & Co. have added to their products a line of granules and tablet triturates, based on the duodecimal system described.

The granules have been named "diurnal granules," or "diurnules" for brevity, and the tablet triturates "diurnal tablet triturates."

The prescription of these will enable the physician to safely determine to a nicety the effect of the drug prescribed for each patient. The method is so simple that every physician should be able to take up this plan of administering medicine readily.

The diurnal tablet triturates are better adapted for administering to children who do not readily take pills or granules (they may be powdered or dissolved in water), while to adults may be administered either diurnules or diurnal tablet triturates, as individual idiosyncrasy or taste may prefer.

The sugar-coating of the diurnules will be colored yellow to distinguish them from other lines of granules, parvules, and pillules.

To facilitate administering, cross lines will be stamped on each diurnal tablet, which will enable physicians to easily divide each tablet into two or four equal parts should it be desired to reduce the dose one-half or one-fourth,

In order to make the dosage list as correct as possible, the leading authorities have been consulted, and the list submitted to a number of therapeutists of eminence, who have passed upon the correctness of the dosage.

The diurnules and diurnal tablet triturates include the following medicinal agents:

Aconitine crystals; arsenic bromide; arsenic iodide; arsenic sulphide; arsenious acid; atropine sulphate; brucine; cocaine hydrochlorate; colchicine; colocynthidin; coniine hydrobromate; copper arsenite; corrosive sublimate; curarine; daturine; digitalin; elaterin; gelsemine hydrochlorate; mercury and arsenic iodide (substitute for Donovan's sol.); mercury biniodide; mercury protiodide; hydrastine sulphate; hydrastinine hydrochlorate; hyoscine hydrobromate; hyoscyamine, pure; iron arseniate; morphine acetate; morphine hydrochlorate; morphine sulphate; nitroglycerin; phosphorus; physostigmine sulphate; podophyllin; potassium arsenate; potassium bichromate; potassium cyanide; potassium osmate; quinine arseniate; scillitoxin; sodium arseniate; sparteine sulphate; strophanthin; strychnine nitrate; veratrine sulphate.

MEDICINE IN FICTION.

The British Medical Journal, under this title, discusses entertainingly the crudities of the conception of the novelist and poet of the action of medicines and the effects of disease.

We laughed when Mark Twain proposed to deliver a course of lectures upon chemistry before the Royal Society, adding that he was "in a position to do this with greater freedom, because he knew nothing whatever about the science," but the public do not laugh at, but take in all seriousness, the medical incidents and opinions scattered up and down the pages of the novels and poems which so commonly deal with medical matters. What with the medical books which everybody nowadays feels it his duty to peruse, and the quack advertisements which

force themselves upon his attention wherever he turns, it is impossible to avoid collecting a curious amount of medical information of a sort which is certain to find its way sooner or later from the end of a pen of the ready writer. This is perhaps not to be wondered at, considering how large a place ailments and modes of treatment occupy in our thoughts and interests. The freedom with which the novelist discusses these questions is of course due to the principle which led to Mark Twain's droll suggestion, though it is not acknowledged with such charming *naïveté*. As every man is expected to be a fool or a physician at 40, a novelist can hardly be blamed for assuming the latter character, and he usually does assume it with startling confidence.

One of the strange medical things in "Monte Cristo" is the way in which the old revolutionist, Noirtier, manages to live on, paralyzed in every part of his body except his eyelids, which he winks freely. Yet the old fellow reasons acutely, and finds no difficulty whatever in swallowing food or drink. Dumas seemed absolutely unaware that such a paralytic condition as he describes in Noirtier's cases involved of necessity brain damage of the most serious kind. Elsewhere Dumas made a guillotined head speak and weep. In one of his tales in the volume, "Les mille et un Fantômes," there is a story of a man engaged in making experiments on heads fresh from the guillotine in the Reign of Terror. The doctor is shut up with a sack of fresh heads in a little mortuary chapel, when a voice from one of the heads call him by his name—Albert. "It was the head of Solange; I thought I was going mad. I cried three times: Solange, Solange, Solange! At the third time the eyes opened, looked at me, let two tears fall, and darting forth a dim light as if the soul were escaping, they closed, never to open more." Then there was Krook, the "Lord Chancellor," in "Bleak House," who went off the earthly stage by spontaneous combustion. Dickens might well be excused for falling into an error which was at that time commonly believed in by people who ought to know better. Bulwer Lytton went in for medical marvels in Zanoni, but as he was a student of mystic lore, and actually learned magic from a professed thaumaturgist, the Abbé Constant, his wonders were attributable not so much to his ignorance of medical science as to his belief in the elixir of life and the transmutation of metals.

In "Called Back," we have the blindness and subsequent cure of the hero, and the mental aberration and subsequent recovery of the heroine. There really was some medical knowledge displayed in both these "cases." The peculiar blanching of the heroine's skin after her shock was not at all badly conceived; her partial loss of contact with the outer world was not an ill-contrived symptom, though the facility with which she moved about, and posed like a sane person before her lover, quite lifted her case out of the region of the actual medical world as known to physicians.

It is not surprising that even George Eliot, with all her knowledge of the innermost workings of the human mind, should have lost her way when dealing with the morbid changes of mind and brain. Tito's father, Baldassare, had been a great scholar, but after a long illness his memory upon recovery became a perfect blank; he could recall nothing of his scholarship, though he had not forgotten who he was; with all this Baldassare is not represented as having lost his reason; he remembers his past life, but he can no longer read or write or recall any of his scholarship, for which he had been so distinguished. It was not amnesia nor agraphia with which he was afflicted; it was a form of cerebral disease known only to the eminent novelist.

Wilkie Collins made a specialty of his medical knowledge, and it was upon this account that he was induced to undertake an anti-vivisection novel, which he published under the name of "Heart and Science." The work was equally unsatisfactory both to the persons who inspired it and to the general public. The vivisector may be clearly enough conceived in the novelist's mind, and if his laboratory were the only stage upon which he acted the drama of life would be easily dealt with; but the vivisector in the ordinary relations of life—more especially as the family physician—is another character altogether, and cannot readily be made to fit the circumstances necessary to make a good

sensational novel. Wilkie Collins' effort in this direction was a complete failure, and his medical men and wonderful drugs could never have existed outside his own imagination.

In Dickens' "Tale of Two Cities," where Sydney Carton substitutes himself for the condemned Evremonde, we have premonitions of the chloroform which was to be discovered fifty years later—the chloroform of popular imagination, however, and by no means the $CHCl_3$ of the Pharmacopœia. The poets are, if possible, even worse offenders in the matter of their death scenes than the novelists. A man pulls a 2-drachm phial of some poison from his breast, swallows the contents, proceeds to make a 200-line speech without a pang or a gasp, staggers gracefully backwards to a conveniently-placed seat, drops upon it, clasps the region of the heart with both hands, and dies after a little convulsive movement of the legs. Another is run through the chest with a sword; he falls after some appropriate "business," but usually raises himself to a sitting posture and makes a speech full of the most beautiful sentiment, sighs deeply, and dies. Heart disease, too, carries off heroines in a fashion quite unknown to doctors, and, although it is of the variety known as "broken-heart," has characteristics which must not be generally associated with fracture of so important an organ.

The matter has its serious aspects, for novels occupy an important position in the literature of the day, and form almost the sole mental pabulum of half the mothers, especially amongst the well-to-do classes.

THE IDEAL CONSULTANT.

The picture of what constitutes the ideal consultant is sketched by a recent correspondent of the London Lancet.

Sir Henry Acland, in a memorable publication nearly a generation ago, gave a picture of the ideal consultant.

In a quotation from Suidas he adduced the answer of the consultant Trophilus, when asked to define the all-accomplished physician: "It is he," said Trophilus, "who is able to distinguish between what can and what can *not* be done." This definition may be said to cover every requisite in the medical adviser in whatever circumstances the exigences of his calling may place him; but it does not, of course, enter into native aptitudes, or acquired dexterities, or, in short, into the *ensemble* of qualifications which combine in the physician who is ever ready and never at fault. One definition, or rather indication, of what the successful consultant really is was incidentally given some years ago, by an outsider, in a strictly professional controversy—a definition which embodies the lay belief in the personal power of the physician apart from what special discipline can make him. "A great physician," he said, "is a great artist." This also is true, and will be found on closer analysis to explain the extraordinary success of practitioners whose book-learning or laboratory training is notoriously far inferior to their power in diagnosis and their success in treatment. The Athenian intellect at its best and in its most characteristic mood—essentially artistic as it was—seemed to fulfil the requisites which from time to time attain medical embodiment.

That intellect, in its combination of nimbleness with strength, of centripetal insight with sense of proportion and judicial balance, has been described for all time by Thucydides in his wonderful picture of Themistocles. He dwells on the native understanding of "that Athenian of Athenians;" on his power, without previous information or after-thought, with, indeed, the briefest consideration of the problem in hand, to form a picture in his mind of what it really implied and of what its solution would yield —diagnosis, in short, and prognosis, almost improvised as to readiness; and again, when the problem admitted of only an approximate or provisional solution, he could—"this way and that dividing the swift mind" —alight on the better and avoid the worse interpretation, even in the absence of previous prompting or of the data indispensable for less artistic minds.

Noteworthy, too, is the fact that the intellect here typified is always genial, always repays the confidence it invites by possessing the patient with the belief that its malady is indeed of personal interest to his adviser, who considers, and pronounces, and pre-

scribes as if he were in the other's place. That is what Celsus means when he talks of the "hilaris vultus" of the ideal consultant —what Horace implies by the "deformis ægrimoniæ dulcibus alloquiis." The character thus equipped by nature becomes more and more developed by experience, till, as statesmen and men of letters, and indeed the moral and intellectual grandees of every age, combine in attesting, humanity appears in no more admirable or lovable form than in that of the "ideal consultant."

THE HEALING OF OPERATIVE WOUNDS OF THE ABDOMINAL WALL.

The London Lancet discusses this subject in its June 25th issue. The frequency and variety of the operations performed through wounds made in the abdominal wall justify a special consideration of the best means of obtaining a proper healing of these wounds, especially as the firmness of an abdominal cicatrix plays so important a part in the result of an operation.

In the case of an ordinary laparotomy wound the surgeon endeavors to obtain two special features in the cicatrix—in the first place, firmness, and next, the absence of adhesions between it and the subjacent viscus or viscera. To obtain the latter he must unite the cut peritoneum as closely and accurately as possible and so get a perfect linear scar in the serous membrane. To ensure a firm, unyielding scar it is important to unite all the divided tissues and not merely the cut peritoneum and skin. Then when primary union has occurred the recent cicatrix must be supported from without by strapping, a bandage or a belt, until it has become strong enough to resist the abdominal pressure. Two main forms of suture are employed; generally the suture is threaded on a needle at each end and each needle is made to transfix the abdominal wall from the serous coat through all the structures to the skin. The other method is by means of a series of buried sutures. The first is a fine continuous suture of the serous membrane, then a second is placed in the cut or separated muscle, and finally the skin is sutured. At the end of a long operation such a suture is tedious, and it is absolutely necessary to have aseptic sutures. There is no doubt the suture obtained by the system of buried sutures is very excellent, and this should impress surgeons with the importance of stitching the abdominal wound in such an even, regular manner that the entire cut surfaces are brought into exact apposition until their union is secured.

Another group of cases is made up of those in which a permanent opening into a mucous canal is obtained — such, for example, as in gastrostomy and colotomy. Here the main purpose is to obtain a firm, unyielding union between the given viscus and the abdominal wall. A common plan to follow is to unite the cut edge of the parietal peritoneum to the skin and in that way close the wound of the muscle, etc., and then to unite the serous and muscular coat of the stomach or intestine to the peritoneum only. The advantage of this plan is that it brings into close apposition two serous surfaces which very quickly unite and shut off the serous sac. The drawback to it is twofold: In the first place, it takes time; and, in the second place, the union of the parietal peritoneum and skin is liable to yield and allow the viscus to slip back. A far simpler and better plan is to draw out the stomach or bowel and unite it to the skin only. This plan is extremely simple and expeditious and, best of all, it makes an exceedingly strong union of the viscus to the abdominal wall. The serous coat of the stomach or bowel unites very quickly and securely to the cut muscle and fascia, and no fear need be entertained of evil effects from blood or other exudation from the wound finding its way into the peritoneal cavity or of slipping back of the bowel.

In the third group are the cases in which a hollow viscus, an abscess or a cyst, is opened and drained. In the case of a hollow viscus—*e. g.*, the gall-bladder after cholecystotomy or the urinary bladder after suprapubic lithotomy or exploration—closure of the wound in the viscus and abdominal wall is desired without diminution of the size of the viscus. This is the most rapidly and surely obtained if the bladder is united to the deepest layers of the abdominal wall only, and not to the skin. The gall-bladder should be stitched to the peritoneum and

transversalis fascia only, the urinary bladder to the transversalis fascia and deepest part of the rectus muscle only. The effect of this is to have a granulating wound superficial to the mucous membrane, between it and the skin, and this tends to fill up and consolidate very quickly, closing securely over the bladder wound; there is also the minimum of displacement of viscera. Where the older plan is pursued of uniting mucous membrane to the skin there is greater displacement, and the opposed mucous surfaces of the bladder have no tendency to unite, and so the fistula is longer in closing. Where, however, it is an abscess wall or cyst that has to be drained, the object aimed at is quite different. The healing process must start from the bottom and extend upwards; it must close the cavity and not merely the wound into it. The abdominal incision must be the very last part to consolidate, and it may have to remain open for many months. It is an advantage to have any bar to its premature closure, and therefore in these cases it is best to unite the cyst or abscess wall to the skin—alone or in conjunction with the peritoneum—preferably to the skin only.

Too much attention cannot be paid to abdominal scars to prevent their subsequent yielding. When extreme, such a yielding and the subsequent hernia are great sources of suffering and even of danger to the patient, and the means of relieving the distress are very imperfect and unsatisfactory. It is a case where prevention is vastly better than so-called cure. The closure of a simple abdominal wound should be as perfect as possible; the serous surfaces should be accurately united, and all the cut tissues between peritoneum and skin should be brought into apposition with precision and uniformity. The means by which this is to be done are of far less importance than the attainment of the end in view. Where the viscus has to be permanently fixed to a wound in the abdominal wall, it should be sutured to the skin only. Where a hollow viscus is drained without permanent obliteration of its cavity, its wall should be sutured to the deepest part of the abdominal incision only. Where a pathological cavity is drained with the object of securing its obliteration, its wall should be sutured to the skin.

Notes and News.

The Legal Responsibility of Hospitals in the Treatment of Patients.—

According to Lorenzo D. Bulette, in the International Medical Magazine, the grounds on which a hospital can claim to be exempt are twofold: (1) On the ground of public policy; that if the hospital is liable for the actions of its physicians, charitably disposed persons will be discouraged from contributing to its foundation and maintenance. This argument is met by the statement that the public policy also requires that the onerous duties of a hospital practice shall be performed in a moderately satisfactory way and that such work should not be exempt from liability for negligence or ignorance. (2) The hospital claims exemption on the ground that it has no capital stock, no provision for making dividends or profits; that its funds are held in trust and exclusively dedicated to charitable purposes, and that no part can be applied to indemnify patients.

The Supreme Court of Rhode Island has decided, after much and careful consideration of the cases, that hospitals cannot be exempted, stating in regard to the second claim for exemption that their funds are as applicable to the payment of damages for tort as to the payment of counsel for defending an action for such damages. Both payments are to be regarded as incident to the administration of the trust. The Supreme Court of Massachusetts in a similar case has decided in the opposite way. The question, therefore, is more or less of an open one, but after a study of the cases on record, Mr. Bulette concludes that the hospital must respond in damages to patients in whom malpractice has been clearly proved.—*University Medical Magazine.*

Hæmatozoon of Cholera.—

Surgeon Patrick Hehir, M.D., reports in the Indian Medical Record, May 1, 1892, the results of his microscopic examination of the blood and excreta in cholera. He found polymorphic forms of a parasitic protozoon, and concludes his report by stating that, although he has limited his consideration of this organism to its connection with the blood and dejecta of cholera patients, there

can be little doubt but that, taking into account its enormous facilities for locomotion and penetration, it finds its way into every tissue and organ of the body.

Concurrently with the statement herein made he thinks it would appear that the only condition incident to the production of cholera in the human being is the introduction of the parasitic spores into the alimentary tract; and in this connection regards it as a noteworthy fact that he has found both the mature parasite and not a few of its polymorphic forms and crowds of the spores in the water of two wells out of the only three examined, which had been used by five persons, who were attacked with the disease.

He gives birth to the hope that a suitable remedy for or preventive of cholera will be presented to us by therapeutic research.

Fighting Mice with a Bacillus.—

Professor Lœffler's bacillary crusade against the field-mice of the Thessalian plain has ended in victory. The latest reports announce that the fields are strewn with the corpses of mice. It will be remembered that Professor Lœffler some time ago discovered a new bacillus, the "bacillus typhi murium," which has the power of producing a certain disease in mice, and in mice alone. A plague of field-mice, threatening to destroy the harvest, having appeared in Thessaly, he was appealed to by the Greek Government, and immediately started for Athens. He began his experiments by treating field-mice in the laboratory with injections of his bacillus cultivation, and when these experiments showed his method to be undoubtedly the right one he started for Thessaly with a staff of Greek doctors. Bread-crumbs, saturated with the bacillary substance, were strewn broadcast over certain fields, and as early as a week later the results were visible. Success being now assured, Professor Lœffler will return to Germany, and the bacillus cultivation will be carried on at the seat of war itself.—*Medical Record.*

Preventing Blindness.—

An Act for the prevention of blindness has just been made a law by the Rhode Island Legislature. It is similar to the New York State law, and Rhode Island is the first New England State to adopt it. The important paragraph is the first, and it reads as follows:

"Should any midwife or nurse, or person acting as nurse, having charge of an infant in this State, notice that one or both eyes of such infant are inflamed or reddened at any time within two weeks after its birth, it shall be the duty of such midwife or nurse, or person acting as nurse, so having charge of such infant, to report the fact in writing within six hours to the health officer, or some qualified practitioner of medicine, of the city or town in which the parents of the infant reside."

It has been called the "Sore-Eyes Bill." But as the sore eyes in question cause ten per cent. of the cases of blindness, and are the largest single factor, they naturally deserve special, if not legislative, attention.—*New York Medical Record.*

The Value of Physicians' Services.—

The value which physicians put on their services was shown recently in the United States Circuit Court, before Judge Lacombe, in the trial of a suit brought by Dr. William M. Polk and his assistant, Dr. Charles C. Barrows, to recover $2,500 from William B. Lowe, a wealthy resident of Atlanta, Ga.

Mr. Lowe's daughter, Miss Rebie Lowe, was taken with typhoid pneumonia at her father's home during the latter part of last September. Two Atlanta physicians attended her, but the patient's mother, who is distantly related to Dr. Barrows, insisted that he be summoned. Dr. Barrows was in Atlanta the first ten days of October.

Dr. Barrows was then Dr. Polk's assistant, at a salary of $3,200 a year. Dr. Polk sent a bill to Mr. Lowe for $2,500. Mr. Lowe refused to pay, claiming that the bill was exorbitant.

The case was tried in court. After the testimony of many prominent physicians, indicating that the fee was not exorbitant, the jury awarded Dr. Polk a verdict of $1,500.

Aluminium for Artificial Limbs.—

Aluminium is to be used in the construction of artificial limbs, a use to which it seems to be particularly well adapted, owing to its great strength and lightness.—*Medical Fortnightly.*

Therapeutic Brevities.

Rules for the Care of Infants.—The following are the instructions which the summer corps of physicians of the Board of Health distribute throughout the tenement-house districts during their visits. They are printed in English, German, and Italian: "Overfeeding does more harm than anything else; nurse an infant a month or two old, every two or three hours. Nurse an infant of six months or older, five times in twenty-four hours, and no more. If an infant is thirsty, give it pure water, or barley water, no sugar. On the hottest days, a few drops of whiskey may be added to either water or food; the whiskey not to exceed a teaspoonful in twenty-four hours. Boil a teaspoonful of powdered barley (ground in coffee-grinder) and one-half pint of water, with a little salt, for fifteen minutes, strain, then mix it with half as much boiled milk, add a lump of white sugar, size of a walnut, and give it lukewarm from a nursing-bottle. Keep bottle and mouth-piece in a bowl of water when not in use, to which a little soda may be added. For infants five or six months old, give half barley water and half boiled milk, with salt and a lump of sugar. For older infants, give more milk than barley water. In hot weather, if blue litmus paper applied to the food turns red the food is too acid, and you must make a fresh mess, or add a small pinch of baking soda. Infants of six months may have beef-tea, or beef-soup once a day, by itself, or mixed with other food; and when ten or twelve months old, a crust of bread and a piece of rare beef to suck. No child under two years ought to eat at your table. Give no candies; in fact, nothing that is not contained in these rules, without a doctor's orders. Summer complaint comes from over-feeding and hot and foul air. Keep doors and windows open. Wash your well children with cool water twice a day, or oftener in the hot season. Never neglect looseness of the bowels in an infant; consult the family or dispensary physician at once, and he will give you rules about what it should take and how it should be nursed. Keep your rooms as cool as possible, have them well ventilated, and do not allow any bad smell to come from sinks, garbage-boxes, or gutters about the house where you live. See that your own apartments are right, and complain to the Board of Health, 301 Mott Street, if the neighborhood is offensive. Where an infant is cross and irritable in the hot weather, a trip on the water will do it a great deal of good (ferry-boat or steamboat), and may prevent cholera infantum."

Acute Coryza.—Dr. Capitan recommends the following snuff to be used every hour for the relief of acute nasal catarrh:

Salol, ʒ ss.
Salicylic acid, gr. vj.
Tannin, gr. iij.
Boric acid, ʒ ij.

The use of this powder should not be continued for more than a few hours, as it is apt to excite a slight eczematous eruption along the edges of the nostrils. The following is another formula, less active, yet said to have given good results:

Powdered talc, ʒ j.
Antipyrin, gr. xv.
Boric acid, ʒ ss.
Salicylic acid, gr. iv.

This may be snuffed freely, as it causes no irritation of the alæ nasi as does the preceding.—*Journal de Médecine et de Chirurgie Pratiques.*

Perchloride of Iron in Typhoid Fever.—Dr. Anderson (Gazzetta degli Ospitali, No. 57, 1892) treats typhoid fever by the administration of hourly doses of five drops of the perchloride of iron in a little water, to which glycerin or syrup is added. If the patient suffer from nausea it may be combated by the addition of twenty-five centigrammes (4 grains) of the subnitrate of bismuth given ten minutes before the iron is taken. According to the writer, the fever and diarrhœa quickly cease under the influence of the perchloride, at the most within five days, if the treatment has been instituted two or three days after the appearance of the fever. The drug should be continued at least a week after the cessation of the fever. The writer has used this treatment for years, and has never lost a case when it was instituted early, *i. e.*, before the appearance of grave symptoms.—*Pritchard.*

Catarrhal Cystitis; Patient Steadily Improved and Now Seems Entirely Well.—Thomas J. Bowles, M.D., commends Sanmetto for a patient who had been a great sufferer with catarrhal cystitis, and who had undergone for a long time the classical routine of treatment, including frequent injections into the bladder of various medicaments, but no permanent benefit was achieved till she began the use of Sanmetto, since which time she has steadily improved and now seems entirely well. I was so forcibly impressed with

its beneficial action in this case that I immediately ordered my druggist to keep it in stock, and I now prescribe it in a number of cases of prostorrhœa, and in gleet with most gratifying results.

Lactic Acid as a Prophylactic in Gout.—Berenger-Feraud (Journal de Médecine de Paris, 1892, No. 15, p. 181) recommends the employment of lactic acid to prevent the gouty attack. To six hundred grains of the acid is added sufficient water to make a solution of twenty teaspoonfuls, each teaspoonful will thus contain thirty grains. Every morning a teaspoonful of the solution is added to two or three glasses of sweetened water and drunk in the course of the day. At the end of twenty days the medication is suspended for ten or twelve days, and then resumed. The treatment should be continued for several years. The remedy is inoffensive, and does not interfere with the digestion or the nutrition.

Strontium Lactate in Tænia. — Laborde (Journal de Med. de Paris) has had excellent results in tænia with the usual dietary care from the following:

℞ Strontii Lact. (Paraf-Javal), ʒ j.
Aquæ, ʒ viij.
Glycerini, q. s.

M. Sig.: Two teaspoonfuls every morning for five days.

This is practically the same strength as the standard solutions of Stront. Lact. (Paraf-Javal), used so largely in albuminuria.

For Chlorosis.—

℞ Ferri et ammonii citrat., gr. xv.
Aquæ destillat., } ää f ʒ j.
Aquæ laurocerasi, }

M. Sig.: ♏xv hypodermatically—one daily for a week, then twice daily.

—Bongiovanni, *Journal de Méd. de Paris.*

For Fissures of the Tongue.—

℞ Acid. carbolic, ʒ ss.
Tr. iodi. } ää ʒ ijss.
Glycerini, }

M. Sig.: Apply topically.

—*Prager med. Woch.*, No. 24.

Ipecacuanha as an Oxytocic.—Ipecacuanha is recommended as a stimulant of uterine contractions. Two or three doses of ten or fifteen drops of the wine in the course of ten minutes suffice to stimulate a sluggish uterus into energetic activity.

Medical Progress.

The Therapy and Etiology of Acute Digestive Disturbances of Childhood.—When the still enormous death-rate among children and infants is contemplated, and at the same time it is known that a large number of these deaths are directly or indirectly due to some digestive disturbance, then anything that tends to throw any light upon the subject cannot fail to awaken the keen interest of every practitioner. True, our increased knowledge of the hygiene of childhood, and especially of infant dietetics, has materially increased the chances of life of such children as come under our care, yet even our present therapeutic means are far from being all that could be desired, and the experiences of those who have made this subject one of special study must be of immediate value.

Dr. Sonnenberger, of Worms, in an article on acute digestive disturbances of childhood, especially cholera infantum, which appeared in a recent number of the Allegemeine medicinische Central-Zeitung, speaks extensively of his experiences with resorcin in these and kindred troubles. It has been some time since Dr. Frühwald called the attention of German physicians to the value of this drug, laying special stress upon its happy action in those digestive disturbances of childhood accompanied with vomiting, and especially on its value in cholera infantum. Since that time, which is now several years ago, Dr. Sonnenberger has been constantly using the drug in these ailments in the St. Anna's Children's Hospital of Vienna, and in the majority of cases has had occasion to be more than satisfied with its prompt and efficient action. Especially in cases of obstinate vomiting can one rely upon its efficiency. Nor has Dr. Sonnenberger been alone in his high opinion of the value of this drug, for Dr. Menche, a German pædiatrist of note, has recently contributed an article to the Centralblatt für klin. Medicin, entitled "Nine Years' Experience with Resorcin as an Internal Medicament," which is an encomium of the therapeutic value of this agent.

Until recently the therapy of acute digestive derangements of children has been rather uncertain, and guided more by individual than general experience. The use of calomel in cholera infantum is certainly of great value, but the most threatening and dangerous symptom—the vomiting—is not always checked by it, and for this very symptom we have a most prompt and efficacious remedy in resorcin. In doses varying

from 0.15 to 0.20 gramme daily, resorcin never gives rise to any symptoms of poisoning or intolerance. Upon the diarrhœa it seems to exert but little influence, so that in the therapy of cholera infantum an astringent should also be administered.

Considering that resorcin has such valuable properties, it is rather surprising that its use in this class of cases is almost wholly unknown. It is equally surprising that the majority of writers on pædiatrics have completely overlooked the drug, although this may be explained by the fact that, as in large doses it is apt to cause toxic symptoms, writers have hesitated to recommend it. Among authors who refer to it are: Bredent (Lehrbuch für Kinderkrankheiten); Epstein, in a recent work (Uber das Wesen und Behandlung der Cholera Infantum), who discards its use altogether, as being a dangerous drug in infancy; Baginsky, in the first edition of his well-known work (Lehrbuch für Kinderkrankheiten), who speaks of its efficacy, yet refers with caution to its powerful toxic properties, but in the third edition of the same work he makes no reference to the drug whatever.

These fears of a possible poisoning, we are told by Menche, are without foundation when the drug's use is confined to the daily dose of 0.1 to 0.12 gramme during the first month and 0.15 and 0.2 gramme for older children. Similar doses are recommended by Seifert in his work on children's diseases, and by H. Guttmann in his book on the same subject. Sonnenberger, Menche, Fruhard, and Concetti (who used it even in larger doses in whooping-cough), who constitute the authorities who have used the drug and given it the most careful study, have never observed the slightest unpleasant symptoms accompanying or following its use when employed in the above-named doses. The danger of possible poisoning is greatly lessened by the use of a pure drug.

It has been recently conceded that opium should never be given alone in acute digestive disturbances of children, but always in conjunction with some disinfectant. Moreover, the use of this drug in infants should be restricted to very small doses, never exceeding one or two drops of the tincture per diem. Many of the most recent writers discard opium entirely. Liebermeister, for instance, asserts that in children under one year of age opium should never be used, claiming that even when given in minimum doses so small that no beneficial action can be obtained there is possible danger. He substitutes the tincture of nux vomica, and in cases of cholera infantum in infants about six months old uses the following formula:

℞ Sodii bicarb., 2 grammes.
Tinct. nucis vomica, gtt. v.
Aquæ fœniculi, 60 grammes.
Sacch. alba, 5 grammes.

M. Sig.: One half-teaspoonful every half-hour.

The use of opium is attended with far greater danger in children than in adults, and symptoms of poisoning and collapse are only too easily produced, especially as in these cases of digestive derangement there is a tendency to collapse. Sonnenberger reports a case of severe opium poisoning, which fortunately terminated favorably, in a child one and a half years old, that had been given seven drops of the simple tincture of opium in the course of a day and a half. If opium be given at all, it should be only in those cases in which there is no tendency to collapse. Seifert, the eminent German pædiatrist, gives the following table of doses:

For children up to one year of age, ½ to 1 drop of the simple tincture of opium daily; from one to two years of age, 1 to 2 drops, always in combination.

The formula in which Sonnenberger has so successfully employed resorcin is as follows:

℞ Resorcin pur., 0.1–0.25 gramme.
Infus. chamom., 70 grammes.
Tr. opii camph., gtt. I to II.
Syr. aurant. cort., 20 grammes.

M. Sig.: Half a teaspoonful every one or two hours.

The opium may be replaced by tincture of rhatany or tincture of cascarilla. Excellent results can confidently be expected from the use of this formula.

Finally, regarding the ætiology of cholera infantum, Sonnenberger, Meinert, and other recent investigators of the subject do not consider it a specific disease, rather a symptomatic complex which may be regarded as acute gastro-enteritis. Ætiologically the disease may be the result of varied factors. In one case it may truly be due to the action of a specific germ, in another the result of poisoning by means of chemical compounds, or poison in food or milk—in the latter case the poison may be some vegetable alkaloid in the milk. This much-mooted question is one open for discussion, but surely these recent contributions are of great value.—*Philadelphia Medical and Surgical Reporter.*

THE VALUE OF MILK LABORATORIES FOR THE ADVANCEMENT OF OUR KNOWLEDGE OF ARTIFICIAL FEEDING.—Two important fac-

tors are demanded by physicians of the present day in solving the problem of rational medicine: First, a means of saving time; second, exact methods of work.

I have long felt that the artificial feeding of infants should be reduced to a more exact system, and that in this way an endeavor should be made to rescue this important branch of pediatrics from the pretensions of proprietary foods and the hands of ignorant nurses. With this purpose in view, I have established a laboratory in which the materials used are clean, sterile, and exact in their percentages, and are combined in any proportion that the physician may wish to prescribe. Laboratories of this kind should be established everywhere, and physicians should write prescriptions for their infant patients' food and put them in the hands of the milk-modifier in his laboratory, just as they write for combinations of drugs in disease, and entrust them to the pharmacist in his drug shop. As the result of clinical experience in infant feeding, I have reached the conclusion that slight changes in the percentage of the three elements of milk of which we have most active knowledge, viz., the fat, sugar, and albuminoids, have an important bearing upon the management of the digestion and nutrition of infants.

In analyses of milk from seven women the fat, sugar, and albuminoids varied to a marked degree, and yet the infants all digested well and thrived on their individual percentages, while what agreed with one produced serious symptoms in another. It seems, therefore, that so far as milk is counted upon as a food, it should be understood to be a general name of the food for the infant, just as dinner is a general name of food for the adult.

This general dinner (milk) of the infant should also be modified in its various parts to suit the digestion of the individual infant.

Perhaps it would be of interest to know what materials were needed, and what processes were gone through with, in carrying out the prescription of the physician.

A laboratory such as that described has already been established in Boston, and is in successful operation, a number of physicians having found it to be an indispensable adjunct to their daily practice.

An important matter is the careful supervision of herds of cows especially selected as to breed and systematically fed, so that the analysis of their milk should be of an almost unvarying percentage. The morning's milk of these cows, milked into glass and kept scrupulously clean, is rapidly cooled and in a few hours delivered at the laboratory. The atmosphere of the laboratory is kept pure and fresh by means of a large fan that keeps up a constant outward current of air. The laboratory itself is lined with white tiles, and contains a separator by means of which a stable 16-per-cent. cream can be quickly obtained from the milk. There is also a large sterilizer into which not only steam can be introduced, but in which the milk can be exposed to high or low temperature at the will of the modifier.

Having once obtained a pure, clean-skimmed milk and cream of a stable percentage, it is merely a matter of mathematic calculation to combine these fluids in such proportions as to produce a mixture in the percentage of fats and albuminoids prescribed by the physician.

The sugar percentage is obtained in like manner by using a carefully prepared 20-per-cent. solution of milk sugar and distilled water.

Diagrams were made to show the prescriptions written by the physicians in fat, sugar, and albuminoid percentages, the same prescriptions translated into drachms and ounces by the milk-modifier, and the figures returned by the chemist to whom the modified milk was sent to test the accuracy of the modifier's calculations.

I have had a large number of test analyses made, so that there is no longer a doubt but that fairly exact combinations can be made in this way.

As the chemistry of the mineral matter in woman's milk is so little known, it is better to ignore that element for the present. Three figures only need be remembered, corresponding to the percentages of fat, sugar, and albuminoids in average human milk—namely: 4, 7, and 1.50.

Starting with those figures, the physician can then easily change one or more of them, either to increase or decrease, according to the need of the especial infant.

As objection has been made to sterilizing at 212° F., this could just as well be done at the safer and lower temperature of 167° F. in the laboratory sterilizer.—T. M. Rotch, M.D., in the *Medical News*.

THE POWER OF SULPHATE OF MAGNESIUM IN CURING CATARRHAL INFLAMMATION OF THE DIGESTIVE TRACT.—Thirty years ago I was treating an infant, aged eighteen months, that had dysentery. My treatment was strictly according to the medical works of the time, but the child did not improve. I treated it about two weeks, when the mother, as well as myself, got disgusted, and

she called in a quack, who treated it about a week, when the mother again called me to attend the patient. I found it worse than ever, having bloody, slimy discharges every twenty minutes. A good angel told me to give the child a big dose of "salts." I did to the extent of a heaping teaspoonful. I trembled as to the result, as the patient was very weak, but seeing the mother a few hours after the medicine was given, she told me the child was white as a sheet when the medicine operated, but had had no more bloody discharges since then. In fact, this one dose of sulphate of magnesium cured the infant, so it was not necessary to give anything more whatever in the way of drugs.

When traveling in Palestine, in 1870, one of our party, Mr. C., of New York, was laid up several days in Jerusalem with dysentery. He was so sick that he could not go with us to Tiberias. Before leaving him I went into an Arab drug store and asked for a quarter of a pound of sulphate of magnesia, got it, and gave the patient a very large dose, that is, as much as I could get on to a great spoon twice, to be repeated every day until the disease was cured. On my return to Jerusalem, a week or more afterward, the patient told me the medicine I gave him very soon cured him, and that he was as well as ever.

About fifteen years ago I was taken with severe inflammation of the three inner coats of the small intestines, viz., mucous, areolar, and muscular; for I had frequent violent griping pains, with bloody and slimy discharges, evidently coming from the small intestines. I commenced treatment with a cupful of clear salts dissolved in water, which operated in about an hour, but this dose did not give the perfect relief that I expected. I therefore took half a pint more of clear salts dissolved in water, one hour from the first dose. This last dose wiped away the inflammation as if by magic when it operated, and left not a trace behind.

Ten years ago, coming home from a journey, I found an old patient of mine who had been laid up several weeks with severe inflammation of the stomach, to wit, gastritis, the peritoneum not being involved. She had been attended by a homœopath for a week or more, with no benefit. I immediately gave her a very large dose of salts, the exact amount I have forgotten, but the patient was up in three days doing her work.

I have thus given three cases of inflammation of the three innermost coats of the large and small intestines, and also of the stomach, to show the power of salts to cure. The infant cure first mentioned opened my eyes very wide to the great value of sulphate of magnesium in catarrhal inflammation of the stomach and bowels, and I could fill many pages of your journal in giving instances of cases cured by it. Whether this medicine is adapted to the treatment of peritonitis I do not know, as I never dared to use it in this disease, but I notice a Liverpool physician, Dr. Hunt, speaks very highly of it here too.

Now, one word in regard to the dose of sulphate of magnesium in the above cases, and I will close.

I have found, in a large experience in using this salt, that small doses do more harm than good. The smallest dose for an infant should not be less than a heaping teaspoonful, and a great spoonful may be given without harm. The truth is, the greater the dose the less it gripes. In my case above, I took half a pint of clear salts dissolved in water without the slightest griping when operating. This medicine does good in the cases mentioned, evidently by producing a copious discharge from the lining of the digestive tract, without having any but the slightest effect upon the muscular coat. It is totally unlike ordinary cathartics; it simply causes the excretion of fluids from the digestive mucous membranes, hence the safety in giving large doses, as the intestinal muscles are not acted upon by them.—S. Bradbury, M. D., in *Medical Record*, July 9, 1892.

Treatment of Reptile Bites.—In the first place, the preventive treatment lies in keeping out of the region inhabited by these pests, or, if you must expose yourself, wearing good protective leggings, etc. The hog is, of all creatures known, the greatest practical enemy of the snake. In some swamp and mountain districts of the country the abundance of the bears prevents the raising of hogs, and here the snakes abound, the bear being the unintentional protector of the snake.

Leaving preventive treatment out of consideration, we may divide the immediate into two heads:

First, the local treatment. Every individual whose occupation exposes him to the danger of such wounds should know that immediate attention to them will save his life in almost any contingency. With a knife, or even with a thorn, cut or tear open the wound until it bleeds freely. As almost all bites are on the extremities, the patient may be able to suck the wound. If so, do it at once—a sore mouth or decayed tooth makes no difference; the very act of suction will prevent the entrance of the poison into

a mouth lesion. If the surgeon is at hand, which seldom happens when the bite first occurs, he should open each of the punctures transversely to the line of lymph and blood flow, and apply a cupping glass. If at hand, a solution of permanganate of potash (10 per cent.) or a strong solution of liquor potassæ, injected into the wound, will destroy the physiological activity of the poison entirely. If he can do two things at the same time, let him likewise tie an extemporized tourniquet around the limb at once. The above treatment is entirely independent of the kind of snake, provided only it be poisonous. Now let me say one word more in regard to the local treatment. In five per cent. of all bites that are recovered from, a chronic septicæmia results. This is due to the fact that almost all snake wounds are more or less infected with pyogenetic bacteria from the saliva of the snake. The viscid mucus always in a serpent's mouth to enable it to swallow its prey is a perfect nidus for the propagation of these germs. The abundance of this mucus gives to our copperhead in many localities the term cotton-mouth, and it is from them especially that we receive these septic bites. In viewing the local effects of venom globulin, in which our snakes abound, we saw a condition produced most favorable to the spread of pyogenic and saprophytic bacteria, and they very readily take hold here. Therefore all snake wounds should have applied to them the same surgical care applied in these days to other wounds. This chronic septicæmia seems to produce a recurrent neuritis in the nerves distributed to the part bitten, and often when similar telluric conditions again obtain we are apt to have herpetic eruptions break out at the seat of the wound.

Turning to the constitutional treatment, we find that alcohol in moderate quantities (not over a half-pint all told) is an agent usually sufficient to maintain the heart's action and blood pressure at a safe point. But as the poison begins to make itself more distinctly felt on the centers we find that alcohol, especially if the amount of venom be great, is unable to prevent a dangerous fall in the force of nerve impulses sent out, and we must assist it by strychnia. One-thirtieth to one-twentieth of a grain hypodermatically administered will increase the nerve-center tone and restore the waning powers. To avoid gangrene of the limb as the result of our tourniquet, it will be necessary at intervals to remove it, and at these times more or less venom will enter the system. By repeating the alcohol, strychnia, and, in case of a Gila Monster bite, digitalis, we may tide over these periods and save a patient under conditions most adverse. The above include all remedies of demonstrated power. Bibron's antidote, the Tanjore pill, viola sagittata, squirrel's ear, sweet oil, and many other remedies each have their advocates, but I know nothing of them. The means that I have suggested have in very many cases saved human life, but they should be in the hands of a man who will not lose his head from excitement.—Abstract from "*The Venomous Reptiles of the United States, with the Treatment of Wounds Inflicted by Them*," by Paul B. Barringer, M.D.

A Case of Vaginismus.—About five months ago Mrs. N. M—— called upon me, from New Jersey, with the following history: She had been married five months, had always enjoyed perfect health, although she was of a somewhat nervous disposition and anæmic. Quite soon after her marriage coition had become impossible. The accompanying pains were something intolerable at first, making, as stated, coition entirely impossible. There was no discharge, no leucorrhœa; defecation and urination were without pain and regular; appetite good.

Upon my request that a thorough examination of the parts locally would be necessary, she gladly consented, but doubted the possibility of a digital examination. As she lay upon my operating-table, inspection showed nothing but a slight œdema and redness of the external parts. Upon my attempt to introduce my index finger, the muscles of the floor of the pelvis became suddenly perfectly rigid, the muscles of the thighs began to contract spasmodically, the patient cried and complained that I was causing her the most agonizing pain. No amount of persuasion could induce her to become quiet or calm, and as she became more and more hysterical I was compelled to desist from all further examination.

I had not even been able to separate the labia, nor had I been able to see the hymen or what was behind it.

A second examination, a week after, was even less successful than the first. The pains had grown more intense, the parts so hyperæsthetic that even the clothes coming in contact produced great agony. Her condition was deplorable, and her marriage life was far from being a happy one.

There was no doubt that the existing symptoms were those of vaginismus, the cause of which I had not as yet been able to detect. Consequently it was considered best

to anæsthetize her and act at once according to the existing lesions.

My friend, Dr. Waechter, kindly administered the chloroform. When perfectly under its influence, and the parts had thoroughly relaxed, my finger entered the introitus vaginæ without the least resistance. The uterus and vagina were explored, but nothing abnormal could be detected.

Nevertheless, a close ocular inspection revealed the following conditions: The hymen had been lacerated into four distinct parts, each of which was more or less triangular in form. On the apices of each of these a small hypertrophic nodular mass (like corns on the feet), of the most extreme sensitiveness, was detected. Naturally I resorted at once to the excision of the entire hymen. There was but little hæmorrhage; the resulting raw surface was left to cicatrize. A tampon of unguentum iodoformi was inserted into the vagina, large enough to distend the entire cavity thoroughly. Calling upon my patient the next day, I could realize at once the success of my operation as experienced by her countenance.

She could change the tampons and irrigate the parts with but little annoyance, except, as she states, a feeling of slight soreness. The introduction of tampons was continued for about ten days longer. The small wounds healed admirably. There was no more pain. She is now pregnant.—Albert Krog, M. D., in *Medical Record*, July 9, 1892.

Sexual Hypochondriasis.—In addition to the large number of cases presenting themselves to the physician for the relief of various real disorders of the genito-urinary apparatus, there is another group, including a portion of the first, the constituents of which manifest great perturbation of mind in consequence of some imaginary affection of the generative system. The greatest number of this second class is made up of males at the period of adolescence.

The two most important, if not the sole, factors that lead to the condition under consideration are masturbation and excessive venery. The patients often present the peculiar aspect and behavior of conscious guilt by which the clinician is sometimes at a glance able to divine the diagnosis.

The more common symptoms of which the patients complain are a "loss of ambition," an inability to concentrate the mind, a sense of weakness, a "lightness in the head," disturbed sleep, impaired appetite, and deranged digestion. Sometimes a patient who has familiarized himself with the popular literature on the subject (of which there is a pernicious superabundance) will frankly volunteer the information of his excesses; another will complain of nocturnal or even diurnal seminal emisions or of other derangement in the sexual sphere. Very often morbid fears have been engendered by the vivid descriptions of unscrupulous persons skilful in the art of playing upon the imagination of the credulous. Visions of "lost manhood," of impaired vitality, etc., float before the victim's eyes, and in despair at the failure of the nostrums that promised certain relief, he comes to the physician requiring treatment rather for a diseased mind than for a diseased body.

It will depend upon the skill and insight of the physician whether he shall accomplish an apparently marvelous cure or confirm the direst anticipations of the unfortunate patient. Success in treatment will not depend upon the administration of drugs, nor as a rule will argument convince the patient of the falsity of his absurd notions. He must be convinced and cured by the logic of demonstration.

The most important factor in treatment is support of the morale. The nervous system will require close attention. The condition is probably one of reactive depression with irritability. Sedatives are not so much demanded as stimulants. Of course, the mode of life must be regulated. We are convinced that if in these cases in males the rest-cure could be carried out as it is in their female analogues it would yield the same brilliant results.

Regularity is essential as to meals, as to sleep, as to occupation. Thought and association must be purified and made cheerful, healthful, and congenial. The patient must be taught to lose his consciousness of self. The cold bath, followed by thorough friction, is the best stimulant. Walking and other out-of-door exercise is a most useful expedient. It need scarcely be said that when organic lesions are present these should, if remediable, be corrected. The medicinal agents that seem to do the most good are arsenic, phosphorus, and strychnine.—*Medical News*, July 9, 1892.

Mistletoe as an Oxytocic.—In the Medical News, Dr. H. P. Howard, of Virginia, reports his personal experience with mistletoe as a substitute for ergot. In one case of very protracted labor, where there was apparent cessation of uterine contraction, the drug was of signal benefit, after a variety of other measures had been resorted

to without the least benefit. He used the fluid extract at irregular intervals, with the effect of terminating labor in about five hours. There was produced a typically normal uterine contraction, both as to strength and regularity. The third stage of the labor was ended by the same pain as that which followed the expulsion of the fœtus. The womb then contracted firmly, promptly, equably, and with a minimum amount of hæmorrhage. In this case delivery was almost wholly uterine in action. The patient was a chronic sufferer from cardiac asthma from mitral lesions and hypertrophy, also peritoneal inflammatory complications; so that any sustained abdominal efforts were out of the question, or if they had been relied upon, the labor must have terminated in death. In this view of the case, the author accords to the drug the largest share of credit for the unexpectedly favorable outcome of the parturition. The author gives some literary information regarding the history of mistletoe as an oxytocic. Dr. W. H. Long, of the United States Marine Hospital Service, published, in 1878, some favorable results from a ten years' trial of the drug. He claimed that he had found it superior to ergot in labor. He advocated the use of the drug in post-partum hæmorrhage, menorrhagia, and hæmoptysis. Dr. Long's paper appeared in New Preparations, and in the Louisville Medical News, for the same year, 1878. In Dr. Long's opinion the drug was capable of producing intermittent uterine action, as distinguished from the tonic contractions caused by some other oxytocic medicines.

About forty years ago, Dr. E. B. Turnipseed called attention to the fact that mistletoe had a certain popular reputation as an abortifacient. His paper was published in the Charleston Medical Review, in one of its earlier volumes. The general therapeutical rating of mistletoe is that it is inert, unmanageable and obsolete, whereas not one of these designations may be the truth.—*Journal of the American Medical Association*, July 2, 1892.

A Chute for Infected Clothing.—Dr. G. H. F. Nuttall, M.D., Ph. D., in the Bulletin of Johns-Hopkins University, April, 1892, describes a chute for infected clothing which has at his suggestion been recently put into operation in the Johns Hopkins Hospital. This chute fulfils certain conditions which are usually absent in such devices, and it has been deemed advisable to draw attention to its advantages, in order that such chutes may be put into operation elsewhere.

The chute consists of a trumpet-shaped, galvanized iron tube, all the joints of which have been soldered. Through the trumpet-shaped expansion clothing can be dropped vertically through the tube, which, on the outside, at its lower extremity is supplied with hooks to which a canvas bag is attached to receive the clothing. The weight of the tube is supported by a metal collar which forms a part of the chute and rests on the floor through which the chute passes into the room below. A trumpet-shaped expansion, the margin of which assumes the form of a horseshoe, is closed by a hinged lid and water-joint. Hooked to the margin of the trumpet-shaped expansion and extending down the whole length of the metal tube, to the shape of which it corresponds, is a canvas lining which, if required, can be kept moistened with disinfectant solution. The canvas above, where it is hooked to the margin of the trumpet, is protected to some extent agalnst wear and tear by a metal collar. The mouth of the chute is made large enough for the nurse or attendant to drop a good-sized bundle of linen into the aperture.

The advantages of a chute of this construction are its simplicity and durability, as also that it guards against the entrance into the room of odors from the clothing (by means of the water-joint), and what is most important, *it can be made thoroughly disinfected.* The canvas tube can be kept moist with disinfectants as already stated, and be renewed and washed at stated intervals. By unhooking the canvas above and letting it fall into the bag below, the perfectly smooth, tight metal tube can be scrubbed out and disinfected by means of a circular brush or sponge. Any infectious material in the shape of dust which might rise through the influence of ascensional currents of air on opening the current are caught on the moistened surface of the canvas tube. The bag can be made to rest on a metal tray, if necessary, filled with disinfectant solution, whereby, in conjunction with an apron-shaped curtain attached to the metal tubes above the hooks and falling into the tray (from which it draws its supply of moisture), complete isolation of the bag of infected clothing can be secured. The dimensions of the clothes tube are: Height of upper part of the floor, 24 inches; diameter of funnel aperture, 24 inches; diameter of tube, 18 inches.

Examination of the Urine by the Centrifugal Machine.—Albu (Berl. klin. Woch., May 30, 1892) says that the centrifugal machine, when once introduced, quickly comes

into general use in the examination of pathological fluids. The author has thus examined some hundred hospital urines, one-half of which were from cases of Bright's disease. The deposit was compared with that after standing. Like gravitation, centrifugal force would seem to have its limits. Sometimes no deposit is obtained, and at other times perfectly clear urine gives one. The greater part of this deposit falls in a few minutes, and the microscope shows it to be richer than that obtained by standing, but the difference is in quantity rather than quality. There is no advantage in adding alcohol or barium carbonate except in cases of examination for bacilli. In apparently healthy urine a greater or less number of leucocytes, or flat epithelial cells, were found. In non-albuminous urine hyaline and granular casts were repeatedly seen, and in two-thirds of the cases of acute pneumonia more or less numerous casts, covered with leucocytes or renal epithelium, were observed. Blood cells were at times found by the microscope in cases where the deposit did not look as if it contained any. Other pigment, such as that of jaundice, was found intimately united with formed elements. Bacteria could be separated out by the centrifugal method, but only partially. Twice tubercle bacilli were found demonstrated, but they were also found in the deposit obtained after standing. The estimation of (coagulated) albumin by this method was not more accurate than by Esbach's albuminometer. The centrifugal method is, however, a valuable addition to the clinical examination of the urine, in that it provides an unaltered sediment in the shortest time, but it is no material help to diagnosis.—*British Medical Journal*, July 2, 1892.

The Micro-organisms of Cancer.—In an article on cancer of the pancreas, Dr. Simon Flexner (Johns Hopkins Bulletin) describes the results of his investigation of the so-called organisms or "coccidia" of cancer. He concludes: "We have no difficulty in reconciling the appearances which we have described with those of many writers on the psorospermic origin of cancer and some other affections. Indeed, it is even possible to see in the variety of form and number some of the stages of development which they have depicted. We do not, however, regard these bodies as organisms, but rather interpret them as being degenerations occurring in cells and nuclei, affecting, as a rule, not the whole of these, but circumscribed portions. The observed differences in density, granulation, and homogeneity may, perhaps, be accounted for on the supposition that they depend upon different degrees of one process, or represent different ages. The presence of stained particles within many of them, however, is not so easily understood in those instances where the nuclei of the cells are intact. It may be well to suggest the possibility of their being leucocytes which have wandered into the necrotic parts of cells, as leucocytes are known to enter dead cells in other cases. Some of the stained particles suggest the nuclei of polynuclear leucocytes, while in other cases it is possible to see in the irregular particles what correspond to fragments of nuclei, probably derived from those leucocytes which have perished after having entered the degenerated bodies."—*Medical Record*, July 9, 1892.

Treatment of Acne.—Dr. Wm. F. Waugh, in the Times and Register, summarizes his views on the treatment of acne as follows:

Correct any derangement of the general health which a thorough examination may disclose.

Regulate the general and personal hygiene.

The vigorous application of soft soap is indicated in all cases except the rare acute form, but especially for infiltration.

Nearly all authors recommend sulphur ointments for ordinary cases; mercurials for severe ones.

Except when clearly indicated, internal remedies are rarely of use.

The disease is singularly obstinate; hence, changes in the treatment adopted after mature reflection should not be made except for cause.

Ergot will cause the indurations to disappear quickly, but they will return when the drug is discontinued.

The prolonged use of strychnine and nitro-muriatic acid sometimes effects a cure.

℞ Strychninæ sulphat, gr. j.
Acido nitro-muriatici, f. ʒ iij.
Aquæ dest., q. s. ad f. ʒ v.

M. Sig.: A teaspoonful in water before each meal.

I have more than once failed to benefit a patient until he abstained from malt liquors.

Salophen.—Of the recently introduced remedial agents, salophen appears to have very positive and substantial claims to con-

sideration, and it is hoped that its qualities will be subjected to thorough clinical tests. It is so desirable to have a salicylo-phenolic derivative that will possess the therapeutic virtues of both components without their toxic properties, that therapeutists will watch the trials of salophen with great interest. The special feature of salophen upon which is based its claim to superiority to its homologues is best explained by its chemistry. It is not toxic, and cannot become so in the stomach from the fact that the gastric juice does not react upon it. The pancreatic juices decompose it sufficiently to set free the salicylic component, which is thus permitted to perform its therapeutic office. But the phenolic component is still held in by its chemical bond, and passes off as an acetyl π-amidophenol without toxic influence. In consideration of these facts, together with the highly favorable clinical reports of Drs. Goldmann, Siebel, and Guttmann, there is a strong probability that the long looked for, effective, yet safe remedy for rheumatism and the neuralgias has been discovered. It appears also that salophen is to hold a pre-eminent position as an intestinal antiseptic, and some gratifying reports of its value in typhoid fever have already been made.

Treatment of Nasal Catarrh.—If the patient is seen every two or three days, the crusts can be removed with a cotton-wrapped probe, and this, followed by an alkaline solution, generally suffices. Of solutions there is none better than the modified Dobell, the formula of which is:

℞ Sodii bicarbonatis, } aa ℥ j.
Sodii boratis, }
Acidi carbolici, gtt. xv.
Glycerini, ℥ j.
Aquæ, ℥ iv.
M.

To this is added enough water to make one quart of solution ready for use. It is free from all objections and is at once cheap and efficient. In atrophic rhinitis he gives the patient four ounces of Dobell, full strength, directing the addition of enough soft water to make a quart, and allow its use two or three times a day, following with a mixture of menthol, eucalyptol, and thymol in a hydrocarbon solvent. This last he also uses in spray after the use of the actual cautery. The eucalyptol and menthol are stimulating, and the thymol is antiseptic. In considering the surgery of the upper respiratory passages it is well to bear in mind a few general rules. The one advanced by Bosworth—that anything in the nasal passages that can be encircled by the loop of the snare is abnormal and can be safely removed—while true enough, is harmful if acted on in every case. Dr. Ralph Seiss, in the University Medical Magazine, warns against the indiscriminate employment of surgical methods, claiming, and with more than a show of reason, that the traumatism following cutting, burning, or crushing operations is often productive of new growths more annoying than the original.—Dr. Geo. G. Shoemaker in *Pittsburgh Medical Review*.

Milk: Is its Sterilizing Necessary?—Dr. Freudenreich, after a series of experiments on the action of raw milk on bacteria, has come to the conclusion that it possesses remarkable germicidal properties. He claims that the bacillus of cholera in fresh cow's milk dies in an hour; the bacillus of typhoid fever in twenty-four hours, while other germs die at the end of varying periods. He further found that milk exposed to a temperature of 131° F. loses this germicidal property, as also milk that is four or five days old.

These experiments will set the physicians to thinking very seriously on the advisability of sterilizing milk for infants' food, or for food of adults. We were just congratulating ourselves on the fact that a means of preventing the introduction of disease into the human body through milk had been discovered in sterilization. According to Dr. Freudenreich, one might conclude, at first thought, that we were mistaken in our expectations and confidence, and that raw milk is, after all, preferable for human consumption. —*Bacteriological World*.

Incompatibles of Antipyrin.—The Pharmaceutische Centralblatt, No. 29, 1892, gives the following incompatibles of antipyrin which precipitate the antipyrin from a concentrated solution: 1, Concentrated solution of carbolic acid; 2, tannic acid, and preparations containing it; 3, tincture of iodine; 4, the chlorides of mercury. The following substances also decompose antipyrin when triturated with it: 1, Calomel forms with antipyrin a toxic combination; 2, antipyrin is decomposed when rubbed with beta-naphthol; 3, with chloral antipyrin forms an oleaginous liquid; 4, with bicarbonate of sodium it disengages the odor of ether; 5, salicylate of sodium, equal parts with antipyrin, forms an oleaginous mixture.

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Original Articles.

THE ART OF PRESCRIBING.*

BY DR. DUJARDIN-BEAUMETZ.

In a former lecture I set forth as briefly as possible the history of pharmacy from the most remote antiquity to the present day.

I propose to devote the present lecture to the general study of medicines, for what is the art of prescribing but that of prescribing medicines?

We must, then, first have an understanding as to the meaning of the word *medicine*, and the foundations upon which its therapeutic action is based.

In science, as in many other things, that which is especially difficult is to give a concise and exact definition. We meet with this difficulty in the present case, and if everybody is agreed as to the thing, you will see that there is not entire agreement as to the definition.

Open Robin's Dictionary, and this is the definition which you will find:

"A medicament (or medicine) is any and every substance foreign to the regimen of the state of health, or reduced to a form foreign to such regimen, which may be applied externally or taken internally, for a curative purpose."

Besides the obscurity of this definition, it is defective, in my judgment, by the fact that milk and water, for instance, could not in accordance therewith be comprised among medicines.

Fonssagrives, who has written quite a remarkable work on the medicament (*Sur la Médicament*), has given a definition which, in my opinion, is nearer the truth: "A medicament is any agent which when applied directly to our organs, or when brought there by the blood, arouses in the diseased economy a change by which it may profit."

I believe that we may still simplify this definition, and I should say that a medicine is any agent which is employed for a curative end; and from the special standpoint of these lectures I would say that *any substance employed for a curative end is a medicine.*

The substitution of the word *substance* for *agent* enables me to exclude from my subject bodies which, strictly speaking, do not constitute medicinal substances, such as the red-hot iron, oxygen, etc.

This definition being accepted, we shall now see how medicaments comport themselves in the economy; *i.e.*, we shall study the actions of medicines.

We find, first of all, two great divisions based on the fact of the local or general action of medicinal substances. In the first group are placed local medicaments which have only a topical action; we shall return to these in the course of these lectures. The second group comprehends the immense majority of medicines, which act by penetrating the economy; it is only the latter which I shall study in this lecture. In considering the action of a medicine, we have to study the four following points: (1) The penetration of the economy by the medicine; (2) its passage into the circulation; (3) its elective action; (4) its elimination. This constitutes the *medicinal cycle.* The medicine penetrates the economy, enters the blood, which carries it to the parts where it is destined to act, then it is expelled from the economy by the different emunctories. Let us begin by the penetration of medicines.

Three ways of entrance are offered to the medicament—the skin, the mucous membranes, and the veins. The penetration by the skin is itself divided into three parts; sometimes the medicament is deposited on the derm, sometimes on the skin deprived of its derm, and sometimes it is deposited in the subcutaneous cellular tissue. Hence we have the three following therapeutic methods: The supra-dermic, the dermic, and hypo-

*No. II. "The Medicament." From proof sheets prepared for the MEDICAL AGE.

dermic methods. The supra-dermic method has given rise to numerous disputations, and a great many experiments have been made to ascertain whether or not the skin absorbs medicinal substances. I may mention especially an important work by Willemin, and the thesis of one of my former pupils, Dr. Menier.*

What has occasioned contradictory results among the experimenters is the following fact: All physiologists who have studied the absorption of soluble substances by the skin have chosen the same operative procedure. They place the patient in a bath containing iodide of potassium, and test the urine for the presence of the iodide. When we examine their observations we are impressed by this fact; that in proportion as the temperature is elevated, absorption is rendered more active, and this results, not from the absorption by the skin, but from the fact that the bath sets free iodine vapors, and the patient absorbs these vapors by the lungs. When this cause of error is eliminated, we find that the skin does not absorb the soluble substances. But it is necessary that the epidermis shall be absolutely intact, for the least excoriation or abrasion of the skin causes absorption to be effected.

But the epidermic coat is not absolutely continuous over the skin; we see the orifices of numerous ducts, and in particular those of the sudoriferous glands. It is by these orifices that certain medicinal substances penetrate the skin which may be modified by the sweat. Thus it is that mercury penetrates the economy. Hence, when we wish to obtain the absorption of this substance, we choose for this purpose parts of the skin where the sudoriferous glands are most abundant. For instance, you are aware that one old method of rapid salivation consisted in rubbing mercury into the arm-pits.

I shall not dwell long on the dermic method, which consists in introducing the medicament by the skin devoid of its epidermic covering. This method was once very much in use. When I was a medical student, we were much in the habit of introducing morphine in this way. We would apply little vesicatories of strong water of ammonia, and when the epidermis was raised, we would remove it and dust the wound with morphine. To-day the dermic method is no longer in vogue, being replaced by a mode of administration which has all the advantages of the former without the inconveniences. I refer to the hypodermatic method. The idea of introducing medicines into the subcutaneous cellular tissue is quite of French origin; it originated with an obscure provincial physician, Dr. Lafargue, of Saint Emilion, who on December 27, 1838, communicated to the Academy of Medicine a memoir having for its title "On the Therapeutic Effects of Certain Medicaments Introduced under the Skin." He gave to his method the name of *Medicinal Inoculation*, and this is the way he describes it: "Take a long needle with a groove on one side which is filled with hydrochlorate of morphine reduced to a paste. Plunge this needle *secundum artem* into the soft tissues and allow the morphine to be absorbed *in situ*."

This sentence was written in 1838, and if Lafargue had made his needle hollow and employed liquid solutions, adapting the needle to a syringe, he would have arrived at the hypodermatic method, so much in vogue at the present day.

At all events, the method of medicinal inoculations was abandoned, and it was not until ten years later, in 1857, that Wood, of England, by utilizing the Pravaz-syringe founded definitively the hypodermatic method which constitutes one of the greatest advances of modern therapeutics. To this, however, I intend to return in the lecture which I shall devote to the hypodermatic method, and I pass now to the study of the second channel of absorption of medicaments; I refer to absorption by the mucous membranes. Under this head we shall have to study the mucous membrane of the digestive tube, the pulmonary and other mucous membranes.

In studying the mucous membrane of the digestive tube, we shall have to consider the buccal mucosa, and that of the stomach, and finally that of the intestine.

The buccal mucosa was utilized by a physician of Montpellier, Chrestien by name,

*Willemin: Recherches experimentales sur l'Absorption par le Tegument externe de l'Eau et des Substances solubles (Arch. gen. de Med. July, 1863).

more than eighty years ago; he taught a system of introducing medicaments by frictions over the tongue. He gave to this method the name of *iatraliptic method;* and he applied it especially to the treatment of syphilis by the salts of gold.

An English physician, Peter Clare, applied this same method to the mercurial preparations. To-day these methods are completely abandoned, and I only cite them as curiosities.

The gastric mucosa is the most ordinary channel for the introduction of medicines; it has great advantages in its favor, and also disadvantages; one of the most important is that medicines administered by this channel may undergo profound modifications by reason of the presence of gastric juice. Sometimes it is the gastric juice which favors the penetration of the medicament, as when we give reduced iron. By reason of the presence of hydrochloric acid, a soluble iron chloride is formed, which penetrates the economy. This presence of hydrochloric acid has always much to do with the mechanism of the penetration of the mineral salts; and by reason of this natural acidity we can understand why certain ferments which can only act in alkaline media are destroyed by the gastric juice. This is what happens to pancreatin, for instance, so that some pharmacists have essayed to coat pills of pancreatin with substances which cannot be digested by the stomach, to avoid this acid action of the gastric juice.

This acidity explains why certain compounds which are only decomposed in alkaline media may sojourn in the stomach without undergoing decomposition — salol, for instance. This salicylate of phenol is, in fact, only decomposed in alkaline media; hence it is not till its arrival in the intestine that it breaks up into phenic acid and salicylic acid. It is to-day recognized that there is a great advantage in introducing most medicinal substances along with food; and, with the exception of those which have an emetic action, I think that we may apply this rule to all medicines introduced into the stomach.

This procedure has the following advantages: By giving medicines along with food we avoid the direct irritant action of these drugs on the mucous membrane of the stomach, and, moreover, the increased activity of the circulation which characterizes the digestive process permits their more rapid penetration. Fonssagrives, who gave to this procedure the name of *alimentary method*, was right in insisting on the utility of always administering medicines along with food.

Absorption may take place in the stomach itself, but it is certainly more active in the small intestine. Here another modification may be produced. Heretofore we have been in presence of an acid medium, now we have to do with a medium that is alkaline, and the saline combination introduced into the stomach and modified by the hydrochloric acid of the gastric juice, and thus rendered more soluble by this very action, may undergo in the intestinal canal a new modification which precipitates it in an insoluble state.

As an example, I may cite the mode of disposal of phosphate of lime; in the presence of the gastric juice there is produced a soluble chlorhydro-phosphate of lime. But in the alkaline medium of the intestine there takes place a new precipitation of insoluble calcic-phosphate.

As a general rule, when we wish to make medicines penetrate the economy by the intestines, we should choose preparations which are but little soluble, and which undergo a slow and gradual decomposition, or which, like salol, can only be decomposed in alkaline media. Therefore, when we wish to practice intestinal antisepsis, it is always to the preparations which are but little soluble that we should resort, such as naphthol and the salts of bismuth, etc.

Before leaving the subject of absorption by the intestinal mucosa, I must speak of absorption by the rectum. This as an absorbing surface is much utilized in medicine. There has been much written about the introduction of medicaments by the rectum, and I may mention in particular the writings of Savory and Demarquay. Savory has shown that in the dog the absorption of strychnine is more rapid by the rectum than by the stomach.

Demarquay, in making use of iodide of potassium, has proved that the penetration of the iodide by the rectum is very rapid, and that five minutes after the administration of a lavement containing this salt, we may find the iodide in the urine.

Not only have liquids been introduced by the rectum, but gases as well, and we have seen Daniel Molière, of Lyons, counsel the use of ether in rectal fumigations to produce anæsthesia, and, still more recently, Bergeon has employed gaseous injections in the treatment of tuberculosis. This method is to-day abandoned, but suppositories and medicinal lavements are a precious resource in therapeutics.

After the intestinal mucosa, the respiratory mucous membrane deserves consideration, and we should even give a prominent place to this mucous membrane as an absorbent surface for the following reasons: First, on account of the extreme vascularity of the lungs; secondly, because here the medicament undergoes no modification; lastly, by reason of the rapidity of penetration of the medicament.

Sales Girons, who has made quite a study of this subject, has given the name *respiratory therapeutics* to this method of introducing remedies.

Besides vapors and gases which may be introduced in this way, some have gone so far as to advise injections of medicinal substances directly into the trachea, and if this procedure has been but little employed in man, it is utilized by the veterinary surgeons for their sick horses, which well tolerate these injections by reason of the great extent of their trachea.

I shall say but little in regard to the other mucous membranes; that of the vagina absorbs but little, and the same may be said of the uterine mucosa. At the same time, this mucous membrane, after accouchement, may rapidly absorb medicaments, and it is well to remember this fact when you order corrosive sublimate in vaginal or intra-uterine injections. More than once grave symptoms of mercurial poisoning have followed such injections. The mucous membrane of the bladder absorbs but little. Segalas, then Demarquay, studied the subject of absorption by the vesical mucous membrane, and they have found this to be very feeble in health, but it becomes active when there exist ulcerations of the mucosa; and if I remind you of this fact, it is because we to-day utilize cocaine to obtain local anæsthesia by the bladder. Impressed by the fact that absorption by the bladder is so slight, some medical authorities have counseled the injection of cocaine in considerable quantities to produce vesical anæsthesia, and as much as 7 grammes have been used for this purpose; but it has been found necessary to abandon these large doses, for if there exists the least fissure in the mucous membrane, extremely grave symptoms of cocaine poisoning are sure to follow.

With regard to this difference of absorption between the rectal and vesical mucous membranes, I may cite an instance which will somewhat astonish you. A physician of St. Petersburg, relying on the fact that one may generally inject large doses of cocaine into the bladder with safety, ordered for one of his patients who was suffering from anal fissure a lavement containing 2 grammes of cocaine. The patient succumbed, and the physician, horrified by this accident, killed himself.

It only remains for me, before finishing this subject, to speak of intra-venous medication. The introduction directly into the veins of medicinal substances is rarely practised in therapeutics. Medicines, in fact, have a direct action apart from their elective action, and this direct action may determine blood coagulations which present great danger. Hence physicians have generally been very shy of intra-venous injections.

Oré, of Bordeaux, had nevertheless counseled subcutaneous injections of chloral to produce anæsthesia. The grave accidents that followed these injections compelled him to abandon this method. In America intra-venous injections of milk were formerly employed. This is also an extremely dangerous procedure, for milk contains fat globules which constitute veritable emboli. We have, then, retained only blood and saline solutions for these injections. The intra-venous injection of blood is transfusion; that of saline solutions has been applied to the treatment of cholera. I myself practiced this method in 1875, and Hayem at a later date utilized these injections in cholera. These same injections have been recommended in diabetic coma.

I have finished this subject of absorption, and I come next to the second act of the medicinal cycle, the presence of the medica-

ments in the blood. We know but little about the state of medicines in the blood. It is generally in combination with the albuminoids of blood-serum and under the form of alkaline albuminoids that medicines traverse the circulatory stream. The nearer the medicine is brought to this alkaline and albuminoid combination, the more rapidly it will penetrate the blood; and there is a fact mentioned by Gubler which deserves to be mentioned in this connection, namely, that medicines with a soda base are better tolerated than those with a base of potassa, just because the alkalinity of the blood-serum is due to the salts of soda and not to those of potassa.

Apropos of the state of medicaments in the blood, I must speak of some experiments undertaken by Bouchard and his pupils on the toxicity of medicines. Bouchard has established the law that to judge of the toxicity of the medicine it is necesssary in animals under experimentation to introduce it directly into the circulating current, and, as you know, he chose the hare for his experiments, and the dorsal vein of the ear, which in this animal is very large and very accessible. I have protested against this mode of experimentation, and have endeavored to show the causes of error to which it may lead; these result especially from the direct and local action on the blood of the substance employed.

It is by a mechanism quite special and of which we are ignorant that the accommodation of the medicament introduced by the stomach or by the skin into the blood is effected; and we really have here a local toxic effect of which we must make great account, and not conclude from the figures which we obtain per kilogramme of the living weight in intra-venous injections as to the real toxicity of the substance.

For example, in the case of chloral, death took place in man, not because the doses were too large, but because they occasioned fatal embolic infarctions.

I go even further, and believe that from the point of view of therapeutic experience this mode of procedure furnishes erroneous results, and I know of no better example of this than that which is furnished by the experiments formerly made by Moutard-Martin and Charles Richet on the action of diuretics.*

These experimenters studied in animals the action of different diuretic medicaments by introducing them directly into the blood, and they arrived at this result with regard to water, that it diminishes the quantity of urine. If, then, we were to rely on such experments in formulating our conclusions as to the diuretic effects of water when administered internally, we should arrive at this conclusion (which would be as strange as it is contrary to the truth), that water is rather *anuric* than diuretic.

Dr. Maurel has been lately making an interesting series of experiments to determine the action of certain medicines on the leucocytes of the blood. He has succeeded in showing that the toxicity of medicaments is, so to speak, proportional to their destructive action on the white globules; and he even explains the resistance of certain animal species to the toxic action of certain medicaments, as atropine, when injected into the veins of the hare, by the fact that the leucocytes of this animal resist the destructive action of the medicament.

He finds also that atropine destroys the white globules of human blood, and in the dose of 5 centigrammes causes immediate disappearance of the leucocytes contained in 100 grammes of that blood, and that their activity and mode of development are modified by a dose of 2 centigrammes; while in the hare the leucocytes can live in blood containing, in every 100 grammes, 2 grammes of atropine.

When once the medicine has entered the blood it begins to produce its elective action. Here everything is mystery, and at the same time there have been some interesting studies to elucidate this subject. Medicines may be said to act in two ways: Some by their local action and their mass (saline purgatives, etc.); others, when introduced in very minute quantities into the economy (alkaloids and glucosides), bring their action to bear upon certain points of the cerebro-spinal axis, and eventually influence a given group of nerve cells; and the rapidity of action of the

* Moutard-Martin and Ch. Richet, Arch. de Phys., t. viii, 1881, p. 3.

medicament is proportional to the time which it takes for the medicine to arrive at the point of the nervous system which it is designed to affect.

The arterial system carries the medicine to the nerve centres, and there the nerve cell, under its influence, modifies the inflammatory or secretory state of the organ whose circulation it regulates. Here we find a notable difference between the divers channels of introduction of the medicament. In the case of the digestive mucosa, the medicine, after having been absorbed, is carried to the liver, and a part of the medicament, especially when alkaloids have been given, is destroyed and modified by that organ. In my lecture "On Diseases of the Liver" I have treated this subject at some length under the head of "the antiseptic liver;" and I have told you that as a result of very many recent experiments we now know that the liver destroys a great number of alkaloids.

Then the rest of the alkaloid, having traversed the hepatic gland, is carried to the right ventricle, and thence through the lungs to the left ventricle, whence it is sent to the nerve centres, where its elective action is felt.

By the long course which it has to traverse, and by the obstacles which it has to encounter on its way, you understand the comparative tardiness of the effect produced by the medicine when it enters the blood by the stomach and intestines.

The hypodermatic method is, on the contrary, much more rapid. We have here neither the modifying action of the gastric juice nor the destructive action of the hepatic gland. Whether it be absorbed by the lymphatics or by the capillaries, the medicament is carried to the lesser pulmonary circulation to be thrown by the left ventricle into the general circulation.

There is nothing but this passage through the lesser circulation that can in any degree diminish the medicinal action, and this is only applicable to substances of a very volatile nature, which vaporize at the temperature of the body.

I might in this connection cite for you some experiments which I have made with injections of chloroform. I have shown that in the human subject considerable doses of chloroform introduced under the skin can never determine surgical anæsthesia, and you will find in a thesis by one of my pupils, Dr. Henri Fournier, a full account of these experiments.*

We have here a physiological truth which Claude Bernard has already pointed out, and of which the explanation is found in the fact of the evaporation of the chloroform introduced into the blood while it traverses the pulmonary network; and if we observe after the injection of 10 grammes of chloroform under the skin a little sleep, it is because the patient takes back by respiration the chloroform which has evaporated in his air passages.

What I have just said in regard to the penetration of medicaments under the skin I may also say of intra-venous injections. At the same time, here the direct penetration into the blood augments the rapidity of absorption; and this it is which explains the accidents which supervene when, in giving hypodermatic injections, instead of placing the medicine into the cellular tissue we introduce it directly into veins.

But it is the pulmonary absorbent surface which occupies the first rank in regard to the rapidity of action, for the medicinal substance when inhaled is carried directly to the left ventricle, to be immediately thrown into the general circulation.

Claude Bernard, struck by this fact, counseled in cases of urgency to practice medicinal injection into the trachea, and Jousset (of Bellesmes) has adopted this method in cases of pernicious intermittent fever; yet, despite the support which veterinary medicine has given to this method, it must be admitted that it can have but a limited sphere of usefulness.

The medicine produces its elective action. Here, unfortunately, all is still mystery. Then, when once this action is produced, the medicine is eliminated from the organism—(1) by the fæcal matters, (2) by the skin, (3) by the lungs, (4) by the kidneys. We have here a therapeutic law of very great interest. Every substance, to produce its medicinal effect, must be eliminated. If this elimination is not effected, the toxic effect takes the

*Henri Fournier: "On the Effects of Chloroform in Hypodermatic Injections." (Thèse de Paris, 1878.)

place of the therapeutic effect; and here it is that we place so great stress on the importance of the rôle which the permeability of the kidney plays in the action of remedies. When the kidneys are not permeable, we often see supervene real toxic effects after giving medicaments in therapeutic doses, and I might cite an abundance of examples to prove this.

Iodide and bromide of potassium produce, even in small doses, in persons with renal disease, many pronounced symptoms of iodism and of bromism. It is the same with salicylic acid, and my pupil, Mlle. de Chopin, has shown that grave cerebral accidents may happen to old people with kidneys impermeable (or nearly so) after large doses of salicylic acid. But it is especially after hypodermatic injections that grave accidents are apt to arise, for here the intestinal emunctory cannot make amends for the renal insufficiency.

This question of elimination of medicines calls up another interesting point, namely, the medicinal eruptions (pathogenetic eruptions, as Bazin calls them), which result from the elimination of the medicament by the skin; copaibic erythema, iodic and bromic acne, the scarlatiniform eruption of antipyrin, all of which affections belong to the same group.

Lastly, I should remind you while on the subject of elimination of medicines, of the separation which takes place among the terebenthinates—of volatile products and of fixed products.

The volatile products are eliminated by the lungs, and fixed products by the kidneys. As an example, take copaiba; the essence of copaiba is eliminated by the lungs and gives to the breath a characteristic odor, while the fixed product, copaivic acid, is eliminated by the urine. I hardly need to remind you of the black coloration of the stools of patients taking iron, and the green coloration produced by the salts of mercury.

The medical cycle is finished, and it remains to say a few words about medicinal associations. In order to augment the effects of medicaments, we may associate them in order to obtain what are called the synergic effects. We associate anæsthetics and analgesics, chloroform with morphine, for instance. We associate different purgatives in order to obtain more active effects; but where this association has given the most positive and best demonstrative results is in the case of antiseptics. When we associate with an antiseptic like phenic acid an acid which is itself but little antiseptic, as benzoic or oxalic acid, we greatly augment the antiseptic properties of the former.

If we can by the association of medicines augment the medicinal effect, we may also diminish it by similar associations, and this leads me to speak of antagonism. It has been affirmed that certain medicines destroy the effects of another medicine; thus atropine diminishes or destroys the effects of morphine. Likewise, cocaine is said to oppose the effects of morphine.

Gentlemen, from a therapeutic as from a toxic point of view, antagonism does not exist. The unfortunate morphiomaniacs who think to diminish the effects of morphine by cocaine subject themselves to a double poisoning, which will in the end result in delirium.

It may be affirmed that every delirious morphiomaniac is a cocainomaniac. It is the same with morphine and atropine, and when we associate these two medicaments we do not destroy their effects, but on the contrary we add to them.

Rosbach and Frœlich have made some experiments which quite corroborate this view, and they have undoubtedly established the two following points: 1, There is no regular antagonism between the effects of the two poisons; 2, the real action of the two poisons can only be paralyzing or excitant.

But, nevertheless, this antagonism considered from another point of view seems to me to exist. When repeating an old experiment of Thenard, we take a rabbit and subject it to inhalations of chloroform or of ether, and then administer a mortal dose of strychnine; as long as the animal remains buried in the anæsthetic sleep, the phenomena of strychnine poisoning are not produced. But as soon as the anæsthetic symptoms have disappeared, the animal will be overwhelmed by the effects of the strychnine. Nevertheless if we can prolong the sleep a sufficient time for the strychnine to be eliminated, the animal will not succumb.

We see the same fact exemplified with regard to alcohol and strychnia. Amagat some time ago showed that alcohol might be considered as an antidote of convulsivant medicaments. The same thing has been demonstrated in the case of chloral, and my pupil, Coudray, has shown that it also applies to paraldehyd, and I have seen in dogs subjected to the action of this drug doses of strychnine injected with impunity that in one-tenth the quantity would, under ordinary circumstances, have caused the death of the animal.

We may, then, formulate this therapeutic law: That when a medicament has produced its action on the nerve centres, another medicament acting on the same point has little or no effect. I add that we may go even further, and say that in order that a medicament may act on the nerve-cells where its elective action should be exercised, these nerve-cells must be in a normal condition (so as to respond); and this leads me to speak of the tolerance and intolerance of medicines.

In certain cases of mental alienation we remark a peculiar intolerance to medicines, and I cannot give a better example than the morphine treatment, which has been applied to certain forms of insanity. In these cases we administer massive doses of morphine, and do not hesitate to inject from the very first ten and even fifteen grains of that alkaloid, and this without danger.

The same fact has been noted in delirium tremens, and Dr. Stackler has told me of a fact which shows that in the children of persons with defective cerebral organizations the same thing prevails. In a patient whose ascendants had succumbed to cerebral disorders it was found impossible to produce chloroform anæsthesia.

If there are persons who have manifested exaggerated tolerance, there are others who are absolutely intolerant, and the annals of medicine contain multitudes of facts where infinitesimal doses have produced toxic phenomena. Such facts have been adduced in connection with morphine, atropine, and aconite. Hysterical patients present this double character of being tolerant towards certain medicines and intolerant towards others, so that we must always be on our guard when instituting any active treatment in hysteria.

Such are the general indications which I wished to present relative to medicaments. We can now take up with advantage the art of prescribing, and this will be the subject of my next lecture, when I shall confine myself to the dermic methods.

LANDMARKS OF GYNÆCOLOGY.

BY FRED BYRON ROBINSON, B.S., M.D.*

In some previous articles in the AGE I spoke of anatomy as being an important landmark of gynæcology. A misunderstanding of pelvic anatomy has caused divisions among gynæcologists, but no doubt has stimulated friends and foes to progress and to get nearer the truth. In another article we suggested that menstruation was a second practical and significant landmark in gynæcology. In this article we propose to consider *labor* as a third landmark of gynæcological practice.

A landmark in any subject is what leads one to cause and effect. By the landmark of labor I mean the pathological effects produced on the woman's physical and mental life. With some women labor will scarcely be a landmark, as it produced no perceptible effects on either physical or mental existence.

The landmarks of labor are immediate or remote, as regards time or pathological anatomy. The immediate landmark of labor is generally some solution of continuity. It may be a parting of structures or a non-return to normal. It may be some gross pathology that one can plainly see or feel. It may be some mental disturbance, which one gets at by reasoning with the unreasoning woman. Her thoughts don't accord with regular daily thinking, and you vote that she is insane. Of course it may be that the only proof she is insane is because her vote is in the minority.

Again, the landmark of labor may be remote—years passed since the baby was born. But the woman is sick, and in fact has never been well since Johnny was born 10 years ago. The cause and effect of her remote sickness I will try to trace through the sympathetic system—the abdominal brain has

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passed through a viscous cycle of disturbances and cheated nourishment. The woman has disturbed circulation, she has disturbed nourishment and disturbed glands, for the sympathetic nerve supplies the circulatory, digestive, and glandular apparatus.

First we will consider the immediate effect of labor as the landmark of gynæcology. No labor is completed without more or less laceration of the genitals. There are sure to be mucous or submucous solutions of continuity. Solutions of continuity or abrasions, in themselves, in other parts of the body are generally not significant or dangerous, but when they arise in the genital apparatus at the time of labor, at the time of the most exalted physiological activity of the uterus, they are prone to lead to pathological conditions. The solutions of continuity allow *infection* to enter the system. Infection is a general term of good and bad distribution, but exceedingly convenient to use in times of war or peace. A very significant remark comes from Prof. Winckel, the best and most practical obstetrician of the present, who, after delivering 17,000 women, says that if no physician or midwife attends a woman during labor she seldom ever has puerperal fever. How full of meaning Winckel's thought is for doctors or midwives ! ! !

The two great points to consider in the immediate effect of labor are: (1) Genital lesions, and (2) infection through these lesions.

In studying lesions of the genitals, we must consider (1) the genital tract from vulva to ovary and also some of the associated organs, as the rectum and bladder. It must always be remembered that there is a direct natural passage from the vulva to the greatest of all lympha sacs—the peritoneum. It might almost be considered a lesion that a woman must have an open passage from her genitals to the peritoneum. It gives a chance for the tubes to be sewers and the peritoneum to be a catch-basin. The great highway of infection is through the natural lesion of the tubes into the peritoneum. The infection, of course, is most liable to go through the tubes where they are the widest, most patulous, and vascular. The poison is likely to go through the tubes when it simply *flows* into the peritoneum. The infection is most liable to go into the peritoneum through the tubes when the mechanical violence of labor has re-excited a recently or anciently inflamed appendage into new activity. Gonorrhœa may be restarted and pathogenic cysts may be ruptured by the violence of labor, and the woman will say: "I was sick from that labor."

(2) The lesions must be considered which induce the lymphatics and veins to carry the infection into the pelvis.

These lesions will be situated from the vulva to the fundus, but 80 per cent. of the lesions which cause fever will be found in the endometrium. The great lesion in the endometrium is the placental site. Another important lesion which instigates the lymph and vein channels to carry infection is lacerated cervix. But the lacerated cervix not only covers immediate pathological effects, but remote effects of years. Then the pelvis may be infected through the intestines, vagina, or bladder; however, these infections are more likely to be remote. The vehicles which carry infection then are: (*a*) Tubes, (*b*) lymphatics, (*c*) veins, (*d*) intestines, (*e*) vagina, and (*f*) bladder. It may be said that it is not merely the lesion that creates the disease, but the lesion *infected* is what does the damage. Gynæcologists create thousands of lesions with their armamentum, but fortunately most heal without any trace of pathology. Pathology mainly follows an *infected* lesion. Mark that *pain*, *fever*, and *chill* are the triumvirate that precede the immediate associated pathology of labor. Much of the remote landmarks of labor (reflex and uterine prolapse) may follow without fever or chill. I will consider that the lesion which makes most of the immediate pathology in the landmarks of labor is the endometric lesion. The main endometric lesion is found at the placental site. Four-fifths of puerperal fever arises from lesions in the endometrium. The infection has the wide channels through which it can poison the pelvic contents—(*a*) the tubes, (*b*) the lymphatics, (*c*) the veins. The results of this pelvic infection constitute the plain landmarks of labor. Some of these are peritonitis, salpingitis, ovaritis, parametritis, perimetritis, and subinvolution. If

pelvic peritonitis is once distinctly marked from labor, it remains a landmark for a long time. If the infection which caused the pelvic peritonitis is gonorrhœal, the woman scarcely ever gets over it during her seed-time and harvest of 30 years. If the infection cause parametritis and perimetritis, she can often be relieved. Gonorrhœal salpingitis is almost incurable except by removal of the tubes. Recurrence characterizes endometritis whether it be specific or non-specific. If the ovaries become infected through the diseased tube, it requires a long time to remove the landmark except by operation. Subinvolution is a landmark of labor that any physician's finger can easily appreciate. The uterus is left too large and heavy. The finger easily feels its thick walls, heavy body, and its prominent lips. Before the uterus subsides to its normal state it becomes arrested. It is simply caught in the act of involution. The cause of subinvolution is infection from the endometrium. But some say it is from getting up too soon after labor, and hence Mr. Tait styles it the hospital uterus.

Infecting an involuting uterus disturbs the normal physiology of degeneration. The elimination of fatty degenerated material ceases to be carried away from the uterus. The downward progress of the subsiding uterus halts from a crippled nerve and vascular supply. What the pathology of a subinvoluted uterus is I do not know. Whether it be excess of muscular or connective tissue is not settled, but subinvolution is a typical landmark of labor. The large, heavy subinvoluted uterus sags down, and many physicians think the uterus is the cause of prolapse. It may be pretty fairly understood that the uterus itself has little to do with prolapse. But prolapse does follow labor, and is a good landmark. The explanation of prolapse as a landmark is as follows: The pelvic floor is made up of a pubic segment and a sacral segment. The pubic segment is the movable one. It moves up and down with the viscera, and hence it may be called the visceral or movable segment. The pubic segment is made up of the retro-pubic fat, the bladder, and the anterior vaginal wall. It is hauled up during labor. The sacral segment is a fixed segment, or it may be called the vertebral segment. It is composed of rectum, perineal body, and posterior vaginal wall. It is pushed down during labor. The division between the pubic and sacral segments is a line between the anterior and posterior vaginal walls. Now in a multiparous woman the pubic segment rests on the sacral segment, and cannot prolapse very well without a deficiency in the sacral segment.

The real cause of prolapse lies in three great defects, each of which may be looked on as a landmark of labor. The first and great cause of uterine prolapse is intra-abdominal pressure. The intra-abdominal pressure begins at the diaphragm. The corset and tight waist-bands aid the prolapse, and also the gynæcologist's income.

The second cause of uterine prolapse is a defect in the sacral segment. In short, the sacral segment becomes straightened out and the uterus is given a chance to slide out. Also the perineal body is lacerated or notched, and adds another chance for the uterus to slide out of the pelvis.

The third cause of prolapse will be a relaxed state of the pubic segment. The pubic segment has lost its tone. It falls out of the pelvis when the woman stands erect. Intra-abdominal pressure, straightening out, and notching of the sacral segment and relaxation or loss of tone in the pubic segment are the causes of prolapse. Prolapse ought to be considered as hernia of the pubic segment.

The plainest and most common landmark of labor is laceration of the cervix. It must be fully understood that merely cervical laceration does not do the damage, as in operations the cervix is torn in all manners, but it easily heals without a trace of pathology in its footsteps. Experience has taught that the tear in the cervix itself is insignificant. The whole matter lies in the peculiar infection which follows. Later experience in gynæcological work has convinced me that the damage to the woman in cervical laceration lies in two forces. First, the cervical laceration induces endometritis. The endometritis is the real trouble with the woman, and not the torn cervix. The second trouble in cervical laceration lies in the disturbance of the abdominal brain through

the hypogastric plexus. The irritation from the cervix and endometrium, long continued, disturbs the even balance of the abdominal brain which presides over circulation, nutrition, and glandular activity.

Now, when I get a woman to treat for cervical laceration, I curette the endometrium and then repair the laceration. Of course, laceration of the cervix does not occupy such a prominent position in gynæcology as it did formerly, but no doubt one quarter of all parturients suffer from uterine disease on account of cervical tears followed by endometritis and nerve reflexes. Lacerations are almost double as frequent in primipara as multipara. I am inclined to think many times the cervix tears on account of a state of non-development. It is congenital.

There seems to be such a thing as infantile os. It never grew in proportion to the uterus, and, of course, when the strain of labor arose it could not withstand the mechanical forces because it lacked in anatomical structure and physiological vitality. It was deficient because of arrest of development, either ante-natal or post-natal.

I find in practicing gynæcology an unfortunate artificial landmark of labor when the forceps have been used. There are too many forceps operations in private practice, I feel sure. Considerable laceration nearly always follows the use of the forceps. And, very unfortunately, doctors use the forceps in the very cases in which the most damage is easily done, viz., in primiparæ. In private practice doctors use the forceps for the following reasons: (*a*) Impatience; (*b*) to cater to the midwife who sends for him, and hence expects him to operate, as she could not finish without help; (*c*) to satisfy friends; (*d*) because the doctor does not comprehend the powers of nature. There is also an unfortunate opinion extant that a reputation rests on performing operations, and the doctor feels he must do something.

Another mark found after labor is phlegmasia alba dolens. The veins or lymphatics are the main points in the pathology. Infection has been carried back into the veins, and thrombi are found. The thrombi are apt to become detached and become emboli, which will float into the lungs, occasionally killing the patient.

Labor is a landmark in gynæcology, then, because it is often followed by the following pathological conditions: (1) Lacerations of the cervix; (2) endometritis; (3) prolapse; (4) endosalpingitis; (5) pelvic peritonitis; (6) ovaritis; (7) parametritis; (8) phlegmasia alba dolens; (9) fistulæ—vesical, vaginal, and intestinal; (10) remote causes due to reflexes through the sympathetic nervous system.

Labor is a landmark of gynæcology due to remote causes. Here I wish to make some remarks in a field which is badly neglected. I am induced to write the above remark from a careful study of the sympathetic nerves in about 20 bodies. I carefully dissected out the sympathetic nerve as completely as possible in nearly 20 cadavers and some dogs. The sympathetic nerve is distributed to the (*a*) digestive tract, (*b*) to the vascular apparatus, and (*c*) to the glandular apparatus. The sympathetic nerve then assumes control over *circulation, nutrition, and secretion.* The cranial cerebrum is for mental progress and protection. The abdominal cerebrum is to keep the physical life going. It supervises all nutrition. Many women consult me who have had a baby three to five years previously. They do not complain especially of distinctly located uterine disease, but they are nervous. They cannot sleep or eat with comfort. They have constipation and all manner of functional disturbances. Cold feet and hands, of course, come in the category. I examine the woman and find cervical laceration, endometritis, and some subinvolution. All the trouble dates back to the labor of five years ago. It is now a remote cause of labor. I find that the average time of women to consult a doctor after cervical laceration and its results is about four years. Now, let us analyze some of the woman's symptoms and difficulties in remote troubles. First, she has cold hands and feet. The cause of the irritation in such a case is from the uterus to the abdominal brain. When the diseased pelvic organ has sent its disturbance to the abdominal brain through the hypogastric plexus and the ovarian plexus of nerves, the irritating force is reorganized there. After being reorganized in the abdominal brain, the irritation ascends to the vaso-motor centre in the medulla ob-

longata. The irritation can travel from the abdominal brain to the medulla by way of the spinal cord and the splanchnics. When the disturbance arrives at the vaso-motor centre it irritates this center, which controls the calibre of blood-vessels externally—the small ones on the surface of the body and at the extremities. If the irritation is constant and considerable, the woman's hands and feet are pale as marble and cold in midsummer. The blood is driven from the surface toward the central organs and she complains of coldness. In the early part of uterine diseases the irritations conveyed to the vaso-motor centre from the uterus through the ovarian plexus of nerves and the hypogastric plexus of nerves to the abdominal brain and then through the splanchnics to the vaso-motor centre vary, and the woman will have hot flashes and cold chills close together. Hence the irritable abdominal brain from uterine disease plays on the vaso-motor centre and tells the story of cold hands and feet of women. The same law of irritable abdominal brain tells the story of "flushes" and sweatings in women with uterine trouble. It is done through the sympathetic nerve, and that too through definite anatomical tracts and by definite organic centres. Everybody has noticed this phenomenon ever since they studied medicine. However, the above is the explanation I offer.

Another common observation every gynæcologist can make daily is that uterine disease is promptly followed by digestive disorders, indigestion, constipation, and wind on the stomach are the three ideas that burden the poor woman with uterine trouble. The course of the irritation is from the generative organs through the ovarian plexus of nerves and hypogastric nerve plexus to the abdominal brain. In the abdominal brain the disturbed forces are reorganized and sent out to the digestive tract through three directions. The irritation goes to the stomach through the gastric plexus of sympathetic nerves. It goes to the small intestine and half the transverse colon by the superior mesenteric plexus of the sympathetic nerves, and it goes to the remaining part of the colon by means of the inferior sympathetic plexus of nerves. As the lower half of the colon is a mere receptacle for waste product, to be periodically emptied when too full, it may be dismissed as of no particular interest to us. The lower colon is governed by the inferior sympathetic plexus. The important structures which concern us are the gastric plexus which supplies the stomach, and the superior mesenteric plexus which supplies all the small intestines and the upper half of the colon.

As years roll on with a woman having uterine disease the irritation is carried up through the hypogastric and ovarian plexus of nerves to the abdominal brain. In the abdominal brain the irritable force is reorganized and sent out to the stomach along the gastric plexus. Now, if the irritable force coming from the abdominal brain to the stomach is of a high tension we will have nausea, or vomiting, or the development of gas in the stomach. The explanation of this is that when the gastric plexus is irritated too highly Auerbach's and Meissner's plexus shares in the irritation. Auerbach's plexus supplies the muscular wall of the stomach and gives too much motion to the stomach. Hence we would have nausea or vomiting. Meissner's plexus attends to secretions of the stomach. If Meissner's plexus is too highly irritated, it will cause too much secretion of gastric fluids and also an irregular secretion. The result of an irregular and excessive secretion of stomach fluids is fermentation. Fermentation causes the development of gases or wind on the stomach. If the gastric plexus receives too little stimulus from the abdominal brain, then Auerbach's plexus will not induce sufficient muscular action for gastric secretion to perform digestion. Therefore uterine disease will produce gastric disorders by sending disturbances to the abdominal brain, which reorganizes them and transmits them to the stomach. The stimulus which the abdominal brain sends to the stomach, caused by uterine disease, may be an excessive stimulus, it may be a deficient stimulus, or it may be an irregular and disorderly stimulus, and the stomach will act according to the kind of stimulus it gets from the abdominal brain. Hence the common connection between uterine and gastric disorders becomes plain by anatomy and physiology, But the most vital rôle in re-

mote landmarks of labor is played by the superior mesenteric plexus of nerves. The superior mesenteric plexus is an enormous plexus which supplies all of the small intestine and the upper half of the colon. The small intestine is the real business end of a man's digestive apparatus. Its great nerve, blood, and lymphatic supply shows that the main assimilation is done in the small bowel, and any disease which deranges the superior mesenteric plexus will play a significant rôle in man's economy. Constipation, diarrhœa, and indigestion then have their main home in the small intestine—all dependent on the superior mesenteric plexus. Uterine disease causes disorder in the small intestine by direct nerve routes. The irritation starts from the uterus and goes to the abdominal brain by way of the hypogastric and ovarian plexuses of nerves. In the abdominal brain the irregular energies accumulate and reorganize, and then are emitted along the great superior mesenteric plexus which supplies over twenty feet of gut. Now, if the irritation emitted from the abdominal brain along the superior mesenteric plexus is of a high tension, we will have Auerbach's plexus unduly irritated, and, of course, excessive muscular action of the bowel. The peristalsis or vermicular movement of the small intestine will be over-active or disorderly. It will cause colic or belly-ache. Now, Meissner's plexus, which presides over intestinal secretion, will also share in the excess of force emitted from the abdominal brain along the superior mesenteric plexus. If the emission be excessive, then too much intestinal secretion will take place, and too much intestinal secretion causes fermentation. Fermentation induces the development of gases, and the woman has "wind on the stomach." Wind on the stomach, which means gases in the small intestines, can all be developed in a few minutes. If the abdominal brain emits insufficient forces along the superior mesenteric plexus, then constipation and indigestion result. Auerbach's plexus will not be stimulated enough to induce peristalsis, which is required to drive the fæces forward. Meissner's plexus will not be stimulated sufficient to call forth intestinal secretions which are needed in proper digestion. So that the kind of energies emitted by the abdominal brain along the superior mesenteric plexus will determine the kind of action in Auerbach's or Meissner's plexus. Hence uterine disease causes indigestion and constipation in the small bowel. (It may be well remembered that gastric and intestinal diseases also in turn produce uterine disease.) Now, view the disturbed liver in women who have womb trouble. The diseased uterus sends its reflexes up the ovarian or hypogastric plexuses to the abdominal brain. Here it is readjusted and duly emitted along the great hepatic plexus. The triumvirate functions of the liver, which are to secrete bile, to form glycogen, and to make urea, are then disturbed. Bile, glycogen, and urea will then be formed too much or too little or irregularly. The liver functions will be unbalanced by abnormal emissions from a disturbed abdominal brain due to a diseased uterus. I have often been called to a hysterical woman (which means an unbalanced abdominal brain) who would vomit up several tablespoonfuls of bile in a short time. The explanation of the matter is that excessive energies had been transmitted from her abdominal brain along the hepatic plexus to the liver, which had then secreted bile too freely because of the undue stimulus. The bile had gone into the duodenum, but here an excessive bowel peristalsis had forced the bile through the pyloris into the stomach, and the same gastro-intestinal movement caused the stomach to expel the the bile through the mouth. The law is the same throughout the abdomen, and that is that the abdominal brain presides over the viscera. It causes the peculiar rhythm of each viscus, and any progressive disease will cause a disorder in the rhythm and function of any viscus. The thoracic organs are under a similar law, but the thoracic organs seem to be different because there each viscus (lung or heart) has a *regular* rhythm that is visible and can be felt. In rhythm the abdominal viscera are not all so regular, but yet rhythm is their essential trait. The heart troubles women with uterine disease often in a very distressing manner. It disturbs the woman because it functionates irregularly (palpitation). In this case the diseased organ sends its disturbed forces to the abdominal brain. Here, after reorganizing,

the accumulated energies pass up along the spinal cord to the cerebrum and then are sent down (the spinal accessory in) the pneumogastric to the heart, and they either stimulate or prohibit action. Also, the forces from the abdominal brain may pass up the splanchnics to the cervical ganglia and here reorganize, and then are emitted along the three nerves from the three cervical ganglia to the heart. These forces from the ganglia destroy the rhythm of the heart, because only ganglia can emit forces to produce rhythm. Thus the abdominal brain presides over the integrity of function of the viscera, both thoracic and abdominal. The generative organs, being the most important of the viscera, are supplied with nerves, and when they get out of order they are prone to disturb all other viscera. I find by dissection of man and some animals that the ganglionic system of woman and female animals is very large.

The abdominal brain and conducting cords of women are very prominent, and especially in connection with the generative organs. In fœtuses and babies the sympathetic nerves are very large. Uterine disease of the chronic kind is pretty sure to be caused through the sympathetic nerves.

In the above remarks I have endeavored to show that labor is a landmark of gynæcology, both immediate and remote, and I think that by such study we will be enabled more successfully to find causes and remove effects—in short, to cure the sick woman. The views here entertained relative to the sympathetic nerve I have worked out during the past three years by observations on freshly slaughtered animals in the butcher-shop, by dissections of dogs, and by a most careful dissection of some 20 cadavers. Men, I think, have much to learn in regard to the sympathetic nerve. Much of uterine disease belongs to the sympathetic nerve and ganglia. Gynæcological surgeons soon observe that when a woman has her ovaries removed for chronic disease she is but little better for about a year. Because the sympathetic nerve is also chronically diseased, and it requires months to recover.

When uterine disease becomes chronic, it is like a heavily loaded train in rapid motion. The train does not stop at once if the steam is taken off. The momentum of the train will induce it to move forward for a long time. And so removal of the ovaries and tubes for chronic pelvic disease does not at once remove the disease. The momentum of the disease will follow for months. Laceration of the cervix then produces its long train of evils through endometritis and irritation of the abdominal brain by means of the ovarian and hypogastric plexus. Laceration of the cervix and endometritis by infection and mal-nutrition through a disturbed abdominal brain constitute a viscous cycle too often seen.

INSANITY FOLLOWING GYNÆCOLOGICAL OPERATIONS.

BY J. M. BALDY, M. D.*

So often has the reproach come to my ears that our almshouses and asylums are full of insane women whose mental condition was due to gynæcological operations that I became somewhat curious on the subject, and determined on finding out how much truth there might be in these rumors. Up to the time of beginning this investigation I had personally not seen a single case of the kind, and could not bring myself to believe that they were of such frequent occurrence. As might have been supposed, these rumors were proved to be as unfounded as they were malicious. Each of the large insane hospitals in the State of Pennsylvania was communicated with, and answers more or less satisfactory were obtained from all but the State Institution at Harrisburg. The information sought was "whether any female patients had been admitted to the hospital within the past five years on whom a laparotomy had been performed and in whom insanity had followed." In some instances the question was misunderstood, and cases in which the operation had been performed for the cure of preëxisting insanity were included. I give the results of these inquiries as they were received:

Harrisburg State Hospital for the Insane: No answer.

* Professor of Gynæcology in the Philadelphia Polyclinic; Gynæcologist to St. Agnes Hospital; Surgeon to Gynæcean Hospital.

Danville State Hospital for the Insane: Dr. S. S. Schultz, states that, "so far as I am aware, no patient was ever admitted into this hospital upon whom a laparotomy had been performed, with one exception." This exception was a young woman who had been addicted to self-abuse for years, and on whom an operation had been performed for acute maniacal excitement. both ovaries were removed. The woman subsequently recovered her health and returned to her husband.

Since receiving this report I understand there has been another case at this hospital, but am unable to state the particulars.

Warren State Hospital for the Insane: Dr. John Curwen writes: "You may think it singular, but out of 376 female patients in this hospital we have not one who has had an abdominal section." He subsequently informed me that this statement applied to his experience both at the Warren Institution and to the one at Harrisburg, with which he was formerly connected.

Western Pennsylvania Hospital for the Insane (Dixmont): Dr. H. A. Hutchinson informs me that during the period of his residence at this institution but two patients have been treated on whom an abdominal section had been performed. In both instances the operation was made for the cure of preëxisting insanity, but each time it failed in its purpose.

Insane Department of Brockley Almshouse: Dr. Hughes states that since 1883 they "have never had a single patient in the house on whom an abdominal section had been performed."

Pennsylvania Hospital for the Insane (Kirkbride's): Dr. Edward Brush has informed me that he cannot state positively, but that he is strongly of the opinion that but two women have been admitted to this institution on whom an abdominal section had been performed. Whether the operations were made prior to the existence of the mental condition was also uncertain.

Norristown State Hospital for the Insane: Dr. Alice Bennett writes that they had five patients in the hospital on whom laparotomy had been performed. The first woman was a patient of Dr. H. A. Kelly, who informs me that there was no previous history of insanity. He attributes the result to the shock of the operation, the symptoms having begun to develop two weeks later. The operation was performed for a large ovarian tumor. She died five months later without any change for the better in her mental condition. It has been ascertained that several cousins on her mother's side of the family had been insane.

The second case was a patient of Dr. J. Henry C. Simes, who informed me that there was a history, both family and personal, free from any tendency to insanity. He attributes the result to the operation, the symptoms beginning to develop two weeks afterward. The operation was performed for incurable metrorrhagia, both ovaries being removed. She is still mentally weak.

The third case was a patient of Dr. W. C. Hollopeter. She was married at the age of sixteen years, and had been an intense sufferer since. There is no history of previous mental disturbance either in herself or in her family. The operation was performed some three years ago for double adherent salpingitis and ovaritis. Some four months later, while away from home, her insanity gradually developed and lasted over a course of several years. She is now well and better than she has been since her marriage.

The fourth case was a patient of Dr. E. E. Montgomery. Some years before the operation she had been in an asylum for mania, but had been well, at the time of the operation, for several years. Bot ovaries were removed. She was well for a year, when she developed insanity. She is still far from well.

The fifth case has a bad family history as to insanity. She had been insane some time before the operation, which was performed, under protest, by Dr. Charles Meigs Wilson. Both ovaries were removed. At the present time (October, 1890) the patient is practically well.

Friends' Asylum for the Insane: Dr. H. A. Tomlinson sends me the histories of only three cases in this hospital. The first case is the same as No. 3 in the report of Dr. Alice Bennett from the Norristown Asylum.

The second case—a patient of Dr. W. Gill Wylie—had been insane for some years previous to the operation, and has not been benefited by it.

The third case was a patient of Dr. Paul Mundé. She had no previous history of insanity, nor can any be obtained for her family. Both ovaries were removed, and her mental condition developed two weeks after the operation. She has become gradually worse, and in November, 1890, was considered hopeless. Dr. Leigh writes me in behalf of Dr. Mundé that the operation was not a severe one, and he does not attribute the result to the operation.

Burn Brae, Clifton Heights: Dr. I. W. Phillips states that that they have had but three women in the house on whom abdominal operations had been performed. All three had pre-existing insanity, and the operation in each instance undertaken for its cure by Dr. William Goodell. One case was cured; the other two were not benefited.

An analysis of the reports of these eight institutions shows a total of fifteen cases, eleven of whom had preëxisting insanity. The operations in the eleven cases were for the most part undertaken for the cure of the mental condition. It is of passing interest to note that in only a small proportion of these cases did any good result, and even here it is doubtful if the operation was the sole factor in the relief obtained. The insane hospitals in the State of Pennsylvania, in spite of all that has been said to the contrary, can muster but four mentally sound female patients on whom an abdominal section has been performed and insanity has followed the operation. Of these four cases one died, one recovered, and two are still insane.

As a matter of fact, mental disturbances following gynæcological operations are much more frequent than is generally supposed. Many of these are of minor degree, or they recover so quickly that it does not become necessary to incarcerate the sufferers in an asylum. A certain proportion of the more severe cases terminate fatally with great rapidity.

In 1888, Ill (Pittsburg Medical Review, January, 1888) reported three cases of insanity following operation, and presented a collect of seven additional ones. In 1889, Thomas (Medical News, April 1, 1889) reported six similar cases and reported twenty others (including the ten reported by Ill). Keith (Medical Press, October 15, 1890) reported that of his sixty-four cases of hysterectomy, six had resulted in insanity, three acute, and three chronic. Tait (Medical News, September 27, 1884) in his first 960 laparotomies met with seven cases of acute melancholia. Robert Barnes states that Sir Spencer Wells had twice during convalescence after ovariotomy seen maniacal attacks. Savage met with this condition three times in 483 cases. I have myself met with two such cases, and am cognizant of a number of others which have not yet been put on record.

The first case I met with was somewhat over a year ago. The patient had a torn perineum, complicated by retocele and cystocele. The parts were repaired by Dr. T. Hewson Bradford, with my assistance. Ether was the anæsthetic used, and the woman was under its influence for over an hour. Immediately upon being put to bed, dry heat was applied by means of hot bottles. The nurses were inexcusably ignorant and careless, and in consequence the patient was most horribly burned in half a dozen places. The burned points sloughed deeply, and were several months in healing. Toward the end of her illness she began to develop peculiar symptoms, and rapidly ran into a condition of melancholia with suicidal and homicidal tendencies. So marked did these become that it was necessary to send her to the Pennsylvania Hospital for the Insane, where she still remains. I am informed she is perfectly well, and will be discharged within the next few weeks. There is no family history of insanity in her case, nor did she ever show any previous tendency to the disease.

My second experience was with a patient sent me by Dr. Joy, of Atlantic City. The woman was married, and about thirty-five years old. She had had one child early in her married life, a bad laceration resulting from her labor. Since this accident she has been a constant sufferer. Her menstrual periods came every three weeks and lasted four or five days, though they were scant. During these periods she had peculiar attacks. She would get what she called "screaming spells." These consisted of periodic outbursts of the most terrific screams, accompa-

nied by violent contortions. These "spells" seemed to be entirely independent of her pain, which was very great. She had on several occasions, during a menstrual period, left her bed and appeared on the streets in her night-clothes, screaming at the top of her voice; in fact, on one occasion she was threatened with arrest for indecent exposure. It has been subsequently learned that she had been an inmate of the University Hospital, and was refused operation on account of a violent attack which kept her confined in a cell for six weeks or more. During her menstrual periods she was in the habit of taking large doses of morphine, but her doctor informed me that she would refuse it at other times. From other sources I have reason for believing that she was in the habit of taking it on her own responsibility.

It was thought that a thorough dilatation of the cervix might relieve her sufficiently to save her an abdominal section, but a most careful search for the os, with the woman under the influence of ether, failed to reveal it. The uterus was large, high up, and fixed. The appendages could not be outlined. The reason of this was easily understood, as there were four inches of fat on the abdominal walls. She was allowed to recover from the effects of the ether, and the same night had a "screaming spell." For the next few days she remained perfectly well in every way. Morphine had been refused her, except on one occasion, from the day she entered the hospital. With the exception of sleeplessness for several nights, this seemed to have no bad effect. An abdominal section was made with the idea of removing the ovaries and bringing on the menopause. The operation was an extremely difficult one. Both ovaries and tubes were bound down. The tubes were in a condition of chronic adherent salpingitis; the ovaries each contained blood cysts the size of walnuts. The enucleation was made with great difficulty, and the ligatures were applied at least three or four inches below the skin surface. I thought at one time that I should fail in accomplishing my object. The woman recovered slowly from the anæsthetic, and it was soon afterward evident that she was not in her right mind. For the first thirty-six hours she gave considerable trouble, but after this became brighter and more quiet; so much so that we thought it safe to move her into the ward. The same night she was moved she had a violent attack, and it became necessary to isolate her once more. For several days she was noisy, incoherent, and cyanotic by spells. Her eyes were dull and she appeared most of the time to be in a dazed condition. About the sixth day she began to be more and more restless, and finally broke out into wild maniacal attacks. She was so violent that it was necessary to strap her in bed. From this time until the end, which was two days later, she became worse and worse. Her struggles and screams were terrific; she could be heard for squares. Drugs seemed to have little influence on her. Morphine, bromide of potash, chloral, ether, hyoscine, and other remedies were used freely, but failed to quiet her, or only did so after having been pushed to the danger point, and then merely for the time. Throughout her whole illness her abdomen remained flat, her temperature and pulse were normal, she ate well, her bowels moved freely, and she passed her urine in normal quantities and at proper intervals. As the end drew near her struggles became more violent, her pulse and temperature began to rise. Finally her pulse became so rapid and feeble that it could not be counted, and a few hours before her death the thermometer registered 108° in the folds of her neck. A post-mortem examination of the abdomen was alone allowed. The seat of the operation was in perfect condition, and there was not the slightest sign of any intra-abdominal trouble. The woman died either from exhaustion or from apoplexy. At the time of the autopsy blood was running freely from the nostrils; this, in conjunction with the fact that the local congestion during the paroxyms was so great, made me think that the latter might have been the determining cause of the death.

These unfortunate results seem to be unavoidable, and as yet no one has succeeded in suggesting a reasonable cause for them, although many theories have been advanced. One is apt with a limited experience (and any single experience must of necessity be limited) to attribute these accidents to some one cause, when, as a matter of fact, several factors are almost certainly at work in each

case. For instance, it has been asserted that all these cases must have had a previous history of mental trouble, or else the family history was bad or doubtful in this respect. But a careful study of the cases reported by different observers will render it plain that such an explanation is admissible in but a small proportion of cases. In the same manner the influence of different drugs, which have come in for their share of blame, may be almost certainly eliminated. In some cases no drug whatever has come in contact with the wound. In no single case is there any conclusive evidence that medication has had any influence in the matter. If fear or dread of the operation had more than an incidental influence in bringing about the result, the proportion of these accidents would be infinitely greater than they are both in the male and in the female. Sepsis in a certain proportion of cases may be looked upon in the light of a cause, but the number of cases in which this is true must be exceedingly small. In many it is not even possible to consider sepsis. My own case, following laparotomy for instance, occurred immediately, and there was absolutely no chance for such an agent to act. Chronic alcoholism is such a common condition with hospital cases that if this were a common cause one would look with certainty for a larger number of bad results than have already occurred. Although all these factors may theoretically have their influence, yet a study of the existing cases shows a very small proportion in which it is at all probable that such was the case. The theory advanced by Mary Putnam Jacobi, viz.: "Dilatation of the blood-vessels of the abdomen from reflex inhibition of the splanchnic nerve," seems to me to be unreconcilable to the facts. There is no good reason for supposing that insanity follows operations on the peritoneal cavity from an entirely different cause than is at work in the case of operations on other parts of the body—and it is a well-known fact that general operations are more frequently followed by this result than laparotomy. Any attempt to offer an explanation for any particular group of cases to the exclusion of all others can only lead to false conclusions. Fillebrown and Prochownick (American Journal of Obstetrics, January, 1889) hold that "the mental disorder is produced by reflex causes arising from the healing processes subsequent to injury to the peritoneum." This explanation is not dissimilar to the one offered by Mary Putnam Jacobi. They go more into detail, however, as to the exact cause of the irritation; but the objections to it are precisely similar to those in the former. The attempt is made to explain a certain class of cases, where the explanation will not hold good for any other case. But even applied to laparotomies, the theory is too faulty to stand examination. In three of Fillebrown's cases there was an exudate with a rise of temperature after the operation. These exudates were referable to inflammations around ligatures, or to small after-hæmorrhages into the peritoneal cavity. The protracted irritation to the peculiarly sensitive peritoneum and its neighborhood, so rich in nerves, finally accumulates and, having reached a certain degree of intensity, ultimately exerts its influence upon the central nervous system."

It is to this concentration of peripheral irritation that they ascribe the outbreak of the mental derangement. How can the cases which occur almost immediately after the operation be reconciled with this theory? Is it altogether true that the peritoneum is such a sensitive membrane and so richly supplied with nerves as we have been in the habit of stating? Is there not more or less exudate in every case in which a ligature has been applied, and are not these cases of insanity comparatively rare? Finally, do not only too many cases of small and in fact large after-hæmorrhages, as well as suppuration and extensive exudations, occur without any sign of mental disturbance? It seems to me that no one of the causes advanced is sufficient to account for these distressing conditions, nor would a combination of them have a direct influence in this direction. The only explanation possible would appear to be the existence of some peculiar condition of the nervous system. This being present, one or more of the factors under consideration are sufficient to cause an explosion. The elements which undoubtedly have the greatest influence in determining the result in the cases occurring immediately after operation are the anæsthetic and the

shock of the operation. The determining causes of the cases which only develop weeks or months after an operation has been performed are not so easily found. What this condition of the nervous system is, and how it may be recognized prior to an operation, is, for the present at least, not known. Where there has been either a personal or family history of mental disease, an operation should only be undertaken with a full understanding of the possible outcome. This factor of the preëxisting tendency to insanity cannot be overlooked. It may be that a patient has never shown any palpable symptoms of this disease, but who can say that the seeds of the trouble do not exist? Those who cling to this theory certainly stand on strong ground, and their position is hard, nay impossible, to assail.

It is well known that women undergoing the change of life are often subject to mental depressions and irregularities. In a few cases it is easy to imagine that the abrupt setting in of the menopause, due to the removal of the ovaries, is the cause. But then some of these patients have only had one ovary removed, and in others the operation has been a plastic one and both ovaries are intact. Nor am I willing to concede, as some contend, that operations on the genital organs have a peculiar tendency in this directions; nor is the complication peculiar to operations on women and their finer nervous organization. Mary Putnam Jacobi several years ago pointed out the fact that almost all works on surgery describe this condition under the name of "traumatic delirium," and she quotes a large number of authorities on the subject. The only series of cases which I have been able to find from which a comparison could be made is contained in an unpublished paper by Dr. Joseph Leidy, Jr. (Philadelphia County Medical Transactions, 1891), the MS. of which has been kindly placed at my disposal. The cases were consecutive ones, observed personally by Dr. Leidy during the past four years in his services at the Pennsylvania and University of Pennsylvania Hospitals. All cases of operation on or about the head have been excluded. In but one case was there an inherited tendency to insanity. In no case was there any previous tendency to this disease. There are in all eighteen cases; of these, ten were males and eight were females—the proportion of men being greater than that of women. In not a single case of the ten men was the operation on the sexual organs. Of the eight women, four were breast cases and all were operated on for cancer of that organ. Of the remaining four women, two had operations on the sexual organs, one an amputation of the hand, and one a double amputation of the legs. From this analysis it will be seen what a small part the sexual organs play in the production of the mental disturbances. All of the breast cases were operated on for malignant disease. These cases are notoriously in a bad general condition, and, as a rule, do not stand operations as well as non-malignant cases. It is much more probable that the general bad condition influenced the result, rather than the fact that the operation was on a part of the sexual system—if the breasts can truly be classed as such. Although cases of severe mental disturbance do not occur with alarming frequency, yet a goodly number have been recorded, and there are many unrecorded ones.

The form generally taken seems to be melancholia, but acute mania is not unknown, as my own case proves.

The prognosis is by no means certain. The majority of patients recover, but this is not an invariable result. The patients of Simes and Mundé are still insane. Kelly's patient died after five months' illness. Keith lost two, Thomas four, and Tait "a good many." My own patient died after eight days of acute mania. As a matter of fact this whole subject remains obscure, but there are certain definite conclusions at which we can arrive, and on which future observations can be based.

1. Cases of serious mental derangement may occur after operations on patients without any previous personal or family histories of insanity.

2. Mental disorders are no more likely to follow operations on the sexual organs than on any other part of the body.

3. Such disorders occur just as frequently in men as in women.

4. Operations are at times the determining cause of mental derangements where

there was no previous tendency to the disease.

5. Mental disturbances occurring a considerable time (months) after an operation are most probably independent of the surgical procedure.

6. The development of psychoses may follow in those cases in which the convalescence from the operation has been perfect.

7. The existence of a predisposition to psychoses should stay the surgeon's hand, except in such cases as are urgent and necessary.

8. Mental derangements follow operative procedures with more frequency than is generally supposed.

Philadelphia, Pa.

THE TRAINING OF CHILDREN.*

BY G. V. VOORHEES, M.D.

"In early childhood you may lay the foundation of poverty or riches, industry or idleness, good or evil, by the habits to which you train your children. Teach them right habits, then, and their future life is safe."

"The character is like white paper; if once blotted, it can hardly be made to appear as white as before."

It being your desire that your child should be pure and good, and reach manhood or womanhood physically well developed, at the same time with an education that shall make that child useful and happy, what must be done to bring about the fulfillment of that desire?

We physicians ought to be able to give advice in this matter, and our advice should be listened to. Is it the case? Are we able to advise? Do we take the trouble to suggest, and, if so, is our advice heeded? Do we show sufficient interest in the training of children? Do we not confine ourselves too much to the treatment of disease, too little to its prevention? Are we not too much medical practitioners, too little teachers of medicine? Are we not looked upon as simply the doctor to be called, in case a member of the family is sick, to give some medicines?

The mental and moral, *i.e.*, the spiritual, attributes depend largely upon the physical well-being. We cannot have a healthy mind except we have a healthy body, and without a well-balanced mind we cannot have morals approximating perfection. It should, therefore, be our constant care and endeavor to assist in bringing about the result desired. We can do much more, perhaps, than any class of men toward removing the evils that now exist.

What are the evils, or some of them, in the training of children, and how are they to be remedied?

It is my opinion that our children are not as they should be, mentally, morally, or physically. I know not what is the experience of others; my own is that few girls reach womanhood in our towns and cities pure and healthy; fewer boys reach manhood with clean minds—and without clean minds how can they have healthy bodies?

These may be remarkable statements, but I think they are nevertheless true. How many school-girls of ten years of age in your parish have not knowledge they should not have? How many girls enter the menstrual period at the age and in the manner they ought? How many boys reach manhood free from the chains of a low appetite?

What is the cause of this condition of our children? Undoubtedly, there are many causes. I will not attempt, however, to point them all out, but there are some so patent that I cannot but observe them. One fault, I think the chief one and the first to be remedied, is that of sending children too early to public school.

"Intellectual effort in the very early years of life is very injurious—all labor of mind, required of children before the seventh year, is in opposition to the laws of Nature, and will prove injurious to the physical organization, and its proper and mature development."—Huffeland.

Spurzheim says: "Experience demonstrates that, of any number of children of equal intellectual powers, those who receive no particular care in infancy and who do not begin to study till the constitution begins to be consolidated, but who enjoy the benefit of a good, physical education, very soon surpass in their studies those who commenced earlier, and who read numerous books when very young." Hear Edwards: "The edu-

* Read before the Michigan State Medical Society.

cation of children should not be forced, like the growth of plants in the hot-house. The more haste in this matter, the less speed in the end. It is from too early forcing the intellect, from premature, precocious, mental growth, that we see in modern times so many cases of wilted, feeble, and sickly children, or of remarkable, wonderful children, who grow up to be prodigies by their second or third year, and die by the next."

Listen to Tissot: "Of ten infants destined for different vocations, I should prefer that the one who is to study through life should be the least learned at the age of twelve."

The school age, according to the statutes of our States, is from five to twenty years. Our State also pays its children a bounty for killing sparrows. The county of Branch paid for the year 1891, $1,752 to 800 children for killing 58,402 sparrows! Think of it! The great State of Michigan teaching its children to be cruel! I fear some of these children will some day cause more trouble and do more harm than the little sparrows they have killed, as a result of the lesson in cruelty they have been taught by the State.

We have wise men for legislators—send babes to school; teach them to be cruel! Take away from them innocence as soon as possible; impart knowledge at the expense of health, and start them early on the path to sin and crime. Is it any wonder that so many break down; that so many quit school before they reach the high school? If it is a wonder that our asylums and prisons are overcrowded now, how will it be in the future?

In the city of my residence, with a population of about five thousand, there were, according to the school census for the year 1890–91, eighty-two children five years old, seventy-five of whom were in school.

Record of number and ages of pupils in Coldwater Public Schools, for the year 1890–91: Five, 75; 6, 109; 7, 104; 8, 94; 9, 105; 10, 96; 11, 91; 12, 101; 13, 105; 14, 81; 15, 62; 16, 70; 17, 47; 18, 21; 19, 16.

A larger number attending school at the ages of six and seven than at any other age! Frequently children only four years of age are sent to our public schools, and in some instances allowed to remain. We have no kindergarten here. In a few of our cities the system of kindergarten teaching is being introduced, which does away with many objections to the early training, as it is more natural, and not forcing in character.

It is my opinion that children ought not to be permitted to attend school until after they are at least seven or eight years of age. The earlier years ought to be devoted to physical development of the child. He should run the fields, and learn from nature.

Parents evidently send their children to school to get them out of the way. A nursery is made of the school-room, the room is overcrowded, the older children cannot have the care and instruction from the teacher they require, and a too numerous train of evils follows.

A lady, in talking with me in regard to sending children from her family to school, said in reply to my remark that I did not believe in sending children to school so young: "Well, there is method in my madness," meaning that she wished to get them out of the way. Ah, there is the secret of the failures in the training of the children—the parents' selfishness, the parents' negligence. The mother casts off her babe to strangers, so that she may have more time for society or the street. She sends that five-year-old baby-boy or girl out into the street with older children, whose morals she knows nothing about, and on the way to and from school that baby picks up more moral infection than is dreamed of by that mother.

One lady said to another, while admiring her boy of five years: "How do you keep him so innocent?" The reply was, "I keep him with me; he has no associates." That mother will be the teacher of that boy as long as possible. She will know where her boy is, and who is to teach him. Who can say the result will not be good? The mother is the proper teacher and associate of the child.

> "The mother in her office holds the key
> Of the soul; and she it is who stamps the coin
> Of character, and makes the being who would be a savage
> But for her gentle cares, a Christian man!
> Then crown her queen of the world."

No woman is a true mother who neglects that office.

I would rather my children receive no

school education, if they must receive it at the expense of moral and physical degradation.

It is not my intention to go fully into this subject. I have simply time to call attention to some things which I consider wrong, among them that of grinding the children all through the same mill, without regard to their mental and physical ability, also that of forcing and cramming. I also believe it is a mistake to send girls to school or allow much mental effort until after the establishment of the menstrual function, *i. e.*, during the period of establishment at least.

Every child should be examined by a competent medical man—appointed and paid for the service—before being permitted to enter school, and frequently during the school life should be subjected to examination, perhaps as often as the child is a candidate for advancement from grade to grade.

There should be upon every board of education one or more physicians, who would conscientiously look after the well-being of the scholars.

In closing, I urge you to read "Where Shall Polly Go to School?" by Edward Everett Hale, in the May number of the Cosmopolitan.

Coldwater, Mich.

PURIFIED KOCH'S LYMPH USED WITH SUCCESS.

Ever since the introduction into this country in January last of the purified Koch's lymph, as prepared by Professor Klebs, of Zurich, Dr. George W. Rachel, supervising physician of St. Mark's Hospital, New York, has been testing it. He says:

"The results so far have at least demonstrated a decidedly favorable influence of the improved lymph on consumptives. The results show that in a disease as dreadful as tuberculosis the tuberculocidin is always worth trying. As to a comparison with Koch's lymph, the tuberculocidin certainly has the great advantage that all deleterious substances, causing disagreeable and sometimes dangerous symptoms, have been removed by Professor Klebs' method of purifying the lymph."

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Editorial.

THE INTERNATIONAL MEDICAL CONGRESS OF 1892.

The last week in September has been officially fixed as that during which the Congress will sit. That this is a matter of vital importance to the success of the meeting no one who is cognizant of the character of the Roman climate in the late summer and early autumn can fail to appreciate. The impression is still a prevailing one that from the close of June to the middle of September Rome is not a healthy place of sojourn.

An Italian correspondent of the London Lancet writes: The high importance of this approaching reunion has been recognized abroad not less than in the peninsula, inasmuch as, while a powerful phalanx of the physicians and surgeons of the Alta Italia have sent in their adhesions, the post brings a daily shoal of letters in which the leading lights of foreign medicine, the scientific academies, the associations, and the institutes of Europe and America announce with the most gratifying expressions of goodwill towards Italy their intention to come in person or to be worthily represented.

In the next few days the Comitato Centrale will address an identical appeal to all the physicians of central and southern Italy, an appeal to which the response, I need not say, will at once be unanimous and enthusiastic.

The Comitati Locali will before the month is out be not less numerous than those which have for some time been in working order in Lombardy, in Piedmont, in the Venetian territory, and in the Emelia.

The Italian Government, we may add, cooperates loyally and effectively with the pro-

fession in its endeavor to make the Congress as brilliantly successful as any of its immediate predecessors, and will, we trust, enable the great promoter of the gathering, Dr. Guido Baccelli, to complete the mighty undertaking of his life, the Roman Policlinico, in time to show his brethren from abroad how Italy can and will improve upon her memorable past in pathological research and in therapeutic resource. To have crowned the edifice of such an institution in presence of the grandees of medical science and medical art will more than entitle the eminent consultant, who is not less distinguished as a patriot than as a physician, to say "Vixi," and to enhance the pride with which he will echo in Rome the welcome that greeted the profession on the façade of the Congress Hall at Berlin, "*Universi Medici Orbis Terrarum Salutamini!*"

THE PROGRESS OF CHOLERA.

From the reports published in European journals it would appear that cholera has been very prevalent in India, and its further development in Europe is feared. Cholera this year has followed the northernmost of the three routes from India, the route which it followed in 1829 and in 1843–44. The movements of trade in Central Asia have been profoundly modified by the building of the Transcaspian Railway, which runs from Samarcand, touches the Persian frontier at Askabad, and strikes westward to the eastern shore of the Caspian. The trading route crosses the Caspian to Baku, which is the terminus of the Transcaucasian Railway, which runs by way of Tiflis into Southern Russia. There is also a large coasting trade from Baku northward to Astrakhan at the mouth of the Volga. Cholera has followed this route from Askabad on the Persian frontier to Saratov, which is 500 versts above the mouth of the Volga.

It reached Persia from Afghanistan, and penetrated the Russian frontier about the end of May or the beginning of April. The first Russian town attacked was Askabad, which is a station on the Transcaspian Railway, and spread along the railway, both eastwards and westwards, with a rapidity which may fairly be called alarming, and is certainly unprecedented. It reached the eastern shore of the Caspian Sea in a few days, and was not arrested by this natural boundary. Following the ordinary course of trade, it soon made its appearance on the western shore of this great inland lake; Baku, the petroleum port, was the first place infected, and a large number of deaths have occurred there. Extraordinary efforts were made by the Russian officials, by quarantine regulations of a very strict kind, which involved the complete arrest of all trade, to keep the epidemic limited to Baku and its immediate neighborhood. When we wrote last week it was hoped that this had been accomplished, but the official news of this week shows that this hope has been disappointed, and that quarantine has once more shown itself to be merely "an elaborate example of leakiness."

From Baku the epidemic has spread in three directions—south to Shusha near the Turkish frontier, north along the line of coasting traffic to the mouth of the Volga, and westward to Tiflis, which is on the Transcaspian Railway. It has been keenly apprehended that if the epidemic once became established at Astrakhan, at the mouth of the Volga, it would quickly gain a foothold in some of the provinces which have suffered most from the famine. This apprehension has, it is to be feared, been realized, for it is now admitted officially that cholera has appeared in Saratov, the capital of the province of that name. Twenty-nine deaths occurred in the first four days of this month, and it is impossible not to feel that the presence of the epidemic among a population already decimated by famine and disease constitutes a very serious menace to Europe. It was reported on July 6th from St. Petersburg that cholera had appeared in the province of Kostroma, some 700 miles further up the Volga, and in the very centre of Russia in Europe.

Very optimistic opinions have been telegraphed from Vienna, but, while sympathizing with the motive of such utterances, we are not altogether prepared to endorse them. The progress of sanitation in this and other countries of Western Europe has come very much to remove the faulty social conditions under which cholera is known to flourish;

but our immunity is only to be secured at the price of constant vigilance. Dr. Proust has truly observed, in a recent report to the Comité Consultatif d'Hygiène de France, that if the infection spreads to the Black Sea there is every prospect of the epidemic following the lines of the visitations of 1831 and 1847—that is to say, either northward through Austria and Germany, or directly eastward through Northern Turkey and the Danubian principalities.

There is no doubt that there has been a considerable prevalence of cholera in India this year, and that it has in fact become distinctly epidemic there. A correspondent, writing from Srinagar under date June 11th, states that the epidemic there began May 9th, and that there had been over 8,000 cases and 5,000 deaths in Srinagar alone out of a population of 124,000, and at least 1,500 deaths in the district. It is hoped that the worst is now over.

A COLLECTIVE INVESTIGATION OF CANCER.

Cancer is the *bête noire* of therapeutics. At least, it is one of the diseases that medical skill can do nothing to prevent the development of and little to relieve.

The idea of M. Verneuil that an anti-cancer league be formed on the lines of Œuvre de la Tuberculose has now through the efforts of MM. Simon Dublay and Paul Reclus taken practical shape, and an organizing committee has been formed with M. Duplay as President, MM. Trasbot (Alfort), Straus (Paris), and Metschnikoff as Vice-Presidents, M. Reclus as General Secretary, M. Ricard as Surgical Secretary, M. Brault as Medical Secretary, and M. Cazin as Secretary for the Department of Experimental Pathology and Morbid Anatomy. M. Rochard is Secretary of the Committee, and M.G. Masson is the Treasurer.

The committee has issued an address to the medical public explaining the objects of the League, and the methods by which they are to be pursued. They appeal for help to "all men of good will," and ask for the co-operation of "pathological anatomists, clinicians, histologists, micro-biologists, and veterinarians."

Explorers and geographers are invited to supply information as to the influence of race and climate in the production of cancer.

The League proposes to organize congresses, where all discoveries made by the members will be made known, and questions relating to malignant disease discussed.

A special publication will appear from time to time, embodying the results of researches on cancer, and giving full bibliographies of current literature on the subject.

Prizes will be offered when the funds of the League permit for the encouragement of workers, and grants of money will also be made at the discretion of the committee to defray the expenses of particular researches. A single payment of 300 francs (£12) entitles to life membership; the annual subscription is 20 francs. Persons wishing to become members, or to contribute to the funds of the League, are requested to communicate with M. G. Masson, 120 Boulevard St. Germain, Paris.

PROF. DA COSTA RETIRES FROM JEFFERSON MEDICAL COLLEGE.

The Philadelphia Medical News announces that Prof. Da Costa will not again take part in the clinical lectures at Jefferson Medical College. When Dr. Da Costa resigned from the Chair of the Practice of Medicine, he was made by the action of the Board of Trustees Emeritus Professor in the department that he had for so many years conducted with such signal ability and distinction, and upon the invitation of the Faculty he delivered his usual course of clinical lectures last winter. Dr. Da Costa has now withdrawn from all teaching connection with Jefferson College. He will, however, continue as Visiting Physician to the Pennsylvania Hospital, and in connection therewith will deliver the usual course of clinical lectures.

Dr. Da Costa's professional and literary work has been for many years so exacting that his many admirers have wondered that he could endure the strain of it.

That his loss will be deeply regretted by the students of Jefferson and all who have followed his teaching there goes without saying.

Notes and News.

Injurious Effects of the Telephone upon Hearing.—

Gellé, of Paris, observes that those who frequently use the telephone sometimes present a series of aural disturbances similar to those resulting from the continued action of loud noises. In such cases there may be found inflammation of the membrana tympani and of the tympanic cavity, or there may be irritable conditions of the nervous apparatus of the ear, exercising an influence upon the general nervous system. Hence, in the cases observed, there were pains in the ear, diminished hearing, subjective noises, hyperæsthesia acoustica, and vertigo, all of which were manifested at first during loud auditory impression, but later became permanent, with general nervous irritability. Probably, for the production of the aforesaid disturbances, there must be a certain predisposition, due either to a greater excitability of the entire nervous system or a previous and still existing disease of the auditory organ.

Against Proprietary Medicines.—

At the meeting of the Missouri State Medical Association the following resolutions were unanimously adopted:

Whereas, The evil of prescribing and recommending proprietary medicines is constantly increasing, much to the detriment of the profession and the public, especially the latter, many of whom are led into the drug habit; therefore,

Be it resolved, by the members of the Missouri State Medical Association, That we condemn the practice on the part of some physicians of giving certificates as to the efficacy or special uses and advantages of proprietary medicines, or what is usually understood by this term.

Resolved, That as a body we recommend to the profession the future discontinuance of such medicines, if now used by them.

Cerebral Tumor Removed Twice in the Same Patient.—

Erb (Wien. med. Presse, Nc. 24, 1892) reports the following case: A man, aged 47, had clonic convulsions affecting the left arm and leg and the left side of the face. This condition was followed after a time by hemiparesis of the whole of the left side. Trephining was performed and a gliosarcoma found in the right anterior central convolution; this was removed as completely as possible. The operation was followed by marked improvement of the paretic symptoms, while the convulsive phenomena ceased altogether. Eight months later, however, they came on again, though with less severity. A year after the first operation the patient was again trephined, and it was found that recurrence had taken place. The growth was again extirpated, the circumjacent tissue being removed even more freely than before. The second operation was also followed by improvement, but the symptoms did not entirely disappear.

Women Physicians.—

Dr. S. Weir Mitchell, in his recent novel, Characteristics, makes the following remarks on the question of women physicians: "I did not believe it was best, either for the sick or for society, for women to be doctors; that, personally, women lose something of the natural charm of their sex in giving themselves either to this or to the other avocations until now in sole possession of man." Women doctors "fail to realize what they have lost. The man who is sensitive to womanly ways sees it. It is worse than nursing the sick, for even nursing makes some women hard."

A Greek Medical Work 2000 Years Old.—

In the last number of the Classical Review, F. G. Kenyon, of the British Museum, who last year edited the newly discovered papyri of Aristotle and Herondas, describes another similar manuscript recently obtained for our national collection, which contains an ancient treatise upon Medicine by a Greek author, probably of Alexandria. The work, which has apparently hitherto been lost, is of much interest. Among the writers cited are Euryphon of Cnidus, Herodicus, Hippocrates, and Timotheus.—*British Medical Journal.*

"The Scalpel," a Monthly Publication.—

The Scalpel is the name of a new monthly publication issued from the College of Physicians and Surgeons of Chicago, and under the editorial care of Dr. Louis J. Mitchell.

Therapeutic Brevities.

Acute Rheumatism.—There is at least one thing about which doctors agree, and that is, the drug which acts most surely in acute rheumatism. Dr. M. Baudouin has made a tour of the Paris hospitals, and finds that all the physicians use salicylate of soda. Some give also bicarbonate of soda and antipyrin, but salicylate is the sheet-anchor. The mode of administration differs, however. Dujardin-Beaumetz gives 15 grains every three hours; Talamon, the same amount every two hours; Straus gives 45 to 60 grains in single doses twice daily; Bouchard, 75 grains of the salicylate and 150 grains of the bicarbonate of soda daily; Barth in some cases gives quinine and antipyrin, while Chauffard uses antipyrin alone, giving 60 to 120 grains daily. Barié gives 30 grains three times a day, and Comby 15 grains every two hours.

In the New York hospitals larger doses than the above are often given. In Bellevue, 20 grains every two hours, for the first day, is usually prescribed. In St. Luke's, oil of wintergreen has been much used. Salol has been given also instead of the salicylate. Nothing has yet approached the salicylates in efficacy in the treatment of acute rheumatism. It is generally the septic and gonorrhœal cases only in which it fails. But there is still a wide divergence of opinion as to how to administer the drug so as to get its effects *cito, tuto, et jucunde.*—*New York Medical Record.*

Snake Poison.—Dr. Mueller, of Victoria, who has had a large experience in the treatment of snake bites with strychnia, says:

"Where there is unmistakable evidence of a large quantity of snake-poison having been absorbed, proportionately large doses of the antidote are called for, and my own experience, as well as that of medical men in all parts of Australia, has proved most conclusively that these large doses may be administered with perfect immunity to the sufferer, and produce the most immediately favorable results. The antagonism between the two poisons is a perfect one. Strychnine does not manifest its usual physiological action in the presence of snake-poison until it has completely overpowered the latter, and I have therefore pointed out, as a safe guide in practice, to watch for the first symptoms of this action, namely, muscular twitchings, and only then to discontinue the use of the antidote, unless after a time the snake-poison reasserts itself."

Dr. Mueller commences, where great danger is apprehended, with hypodermatic injections of one-sixth grain of strychnine, closely watching the effects.—*New York Medical Times*, July, 1892.

The Prevention of Seasickness.—J. B. Donnellan, M.B., B.Ch., in British Medical Journal, says: The treatment I found most useful was sulphonal to produce sleep and deaden reflex excitability. This should be taken, if possible, immediately on going on board, to be repeated if the sickness becomes distressing. Abstention from food during the period that the sickness lasts; iced champagne, followed by light clear soups, and the recumbent position are the most useful remedies. Should the patient be greatly prostrated by continued retching, he must be supported by nutrient enemata of brandy and eggs, etc.

For Ozæna.—

℞ Sodium benzoate, Iodoform, Tar, gtt. v. } āā ʒ iij.
M. et ft. pulv. Sig.: Insufflate.

℞ Iodoform. Roasted coffee, finely ground, } equal parts.
M. et ft. pulv. Sig.: Insufflate.

—Schnitzler, in *L'Union méd.*, No. 49.

Cascara Sagrada as a Corrective of the Constipating Effect of Opium.—Dr. J. W. Smith, of Callahan, Florida, writes:

I had a case in which I was obliged to use large doses of opium, and to overcome the constipating effect I combined it with Cascara Sagrada Extract. I found I obtained all the sedative effect without the narcotic action. The mind was entirely unaffected.

An Antiseptic Powder.—

℞ Pulv. camphoræ, 5 parts.
Pulv. bismuthi subnitrat., Pulv. acidi salicylici Pulv. iodoformi, 55 parts. } āā 20 parts.
M. Sig.: As an application to wounds and ulcerous surfaces.

—Cazozzani, in *Rev. gén. de Clin. et de Thér.*

Bromide of Ethyl as an Anæsthetic.—Bromide of ethyl has been somewhat extensively employed in Vienna for anæsthetic purposes. In Professor Billroth's clinic it was used 300 times without mishap.

Medical Progress.

THE INFLUENCE OF MATERNAL IMPRESSIONS UPON THE FŒTUS.—One of the most striking cases of maternal impressions falling in part under my own observation I have given in my work upon obstetrics, and now repeat it: Some years ago one of the students of Jefferson Medical College called on me to show that his left popliteal vein was varicose, and gave me the history of the supposed cause of this condition. His mother, when four months pregnant (her ninth pregnancy), was one day visited by one of her neighbors, a woman, who told her how much she suffered from a swelled vein behind the left knee, and, uninvited, at once exposed it to view. The pregnant woman was quite startled by the sight, and expressed her sympathy, but requested that the exposure should cease. When her son was born, a precisely similar condition of his left popliteal vein was found, and continues until the present; no other varicose vein could be found; the mother did not have varicosities in this or in any preceding pregnancy. This case might be supplemented by similar ones, given me by trustworthy observers, both lay and professional, illustrating, as they believed, the influence of maternal impressions.

The late Dr. Fordyce Barker, in a very interesting paper upon the subject of the influence of maternal impressions upon the fœtus, stated that "three of the most distinguished writers of fiction in modern times have based incidents on this belief, in a way which they would not have done if they had supposed these incidents would be rejected by their readers as improbable. Goethe, in his 'Elective Affinities,' describes a case in which strong mental impressions at the time of conception, or soon after, affected the child. Sir Walter Scott, in the 'Fortunes of Nigel,' explains the extreme horror which a drawn sword always excited in James I., owing to the brutal murder of Rizzio having been committed in the presence of his unfortunate mother before he saw the light. The theory of 'maternal impressions' is the groundwork on which is constructed 'Elsie Venner,' that remarkable novel by Oliver Wendell Holmes, most original in its conception, fascinating in its dramatic development, and most suggestive in the curious speculations with which it is interspersed."

It might be added that Scott plainly avowed in "Redgauntlet" his faith in the influence of maternal impressions upon the fœtus. In one of Grimm's "Fables" a like belief is indicated. In a Scandinavian novel, entitled "Released," by Elin Ameen, published a year or two since, and an abstract of which was given in the Review of Reviews last year, a most thrilling narrative relating to such impressions is found. A young wife, two months pregnant, has a husband working in a factory; an accidental explosion occurs, he is killed, and his mangled corpse, every limb and feature torn out of recognition, is brought home, and she falls fainting to the ground at the dreadful shock. Seven months after her child is born, with only one arm and without lower limbs.†

The novelist is nothing if not natural. Persons, facts, and events must be so presented that the former seem real and the latter true and correct, else the public reject the story. Thus we have the popular verdict in favor of the thesis presented.

Dr. Barker, in the paper which has been quoted, refers to the opinions of many eminent authorities in favor of a belief in the influence of maternal impressions, among them being Montgomery, Hokitansky, Carpenter, Dalton, Flint, Isidore Geoffroy Saint-Hilaire, Allen Thomson, and Hammond. To these may be added Meadows, Spitzka, Busey, and Dabney, as well as several others well known to the profession. I have, in an article published several years ago, quoted the view of Lotze, one of the greatest German philosophers of the century, as sustaining the belief. Lessing, whose fame is a part of the history of literature a hundred years ago, in referring to the subject, expressed a very positive opinion: "If beautiful men produced beautiful statues, these again reacted upon those who beheld them; and the state was indebted to beautiful statues, among other causes, for beautiful men. With us, the sensitiveness of maternal imagination appears to express itself in monsters. From this point of view, I think I see a truth in certain ancient traditions which have been rejected, without qualification, as lies. The mothers of Aristomenes, of Aris-

*Abstract of Lecture by Theophilus Parvin, M.D., published in International Medical Magazine, June, 1892.

†The story goes on to tell, with deepest pathos, how the mother, dwelling upon the sad fate of her helpless child when she can no longer care for him, determines that she will release him from it, and so, after baptizing him, believing that without baptism the little Hans cannot meet his father Hans in heaven, places him in his cradle, and, putting a pillow over his face, suffocates him. "No more tears for Hans!" she says. Later we see her in her convict cell, pining away her life with no hope in this world, and, since the priest has told her she must repent, and she cannot, none in the next. "But I released my boy!"

todamus, of Alexander the Great, of Augustus, of Galerius—all dreamed, during their pregnancy, of serpents. The serpent was a symbol of godhead, and the beautiful paintings and statues of Bacchus, of Mercury, of Apollo, of Hercules, were seldom without a serpent. The honest women had feasted their eyes on the god during the day, and the dream awakened the image of the beast. Thus I rescue the dream and surrender the explanation which the pride of their sons and the impudence of their flatterers have made of it."

Commodus, son and successor of one of the noblest of Roman emperors, Marcus Aurelius, who ranks with Nero and Caligula in vileness and cruelty, has had the vices of his character attributed to the fact that his mother, Faustina, while pregnant with him, was in love with an infamous gladiator.

Burton* attributes maternal influence upon the fœtus to imagination, as the following quotations show: "Jacob, the patriarch, by force of imagination, made speckled lambs, laying speckled rods before his sheep." "Persina, that Ethiopian queen in Heliodorus, by seeing the picture of Perseus and Andromeda, gave birth to a fair, white child."

"Pregnant women, when they long, yield us prodigious examples in this kind, as moles, warts, scars, harelips, monsters, are especially caused in their children by force of a depraved fancy in them. She imprints that stamp upon her child which she conceives unto herself."

It must be remembered that the most striking instances of maternal impressions are those in which the influence alleged was instantaneous, not continuous in action. And here is an answer to the objector who asserts that many women who fear their children will be marked do not have their fears realized, while others give birth to children having marks, though they had no such dread; the efficient cause of the marking acted at once, and it may not have been thought of during the pregnancy, but recalled after the birth of the child.

Dr. Barker adduced some striking cases falling under his observation in illustration of the influence of maternal impressions. Dr. Busey, in his remarks upon the paper, brought, from a partial study of the literature of the subject, forty-one to strengthen the position. These series of cases should be read by those who are sceptical upon the subject, and see if other explanation is probable.

* Anatomy of Melancholy.

The following is one of the most extraordinary of Dr. Barker's cases: "Mrs. ——, who had been married but a few weeks, was at the theatre with her husband and other friends. Something, she knew not what, vexed him, and he placed the point of his elbow on her hand, which was resting on the arm of her seat, and held it so firmly that she could not draw it away. Not wishing to make a scene, she bore it silently until she fainted. The fingers were much swollen and very painful for several days. She never lived with her husband afterwards, and subsequently obtained a divorce on the ground of cruelty.

"Thirty-five weeks and three days after the theatre incident I attended her, when she gave birth to a son. On the left hand the first and second phalanges of all the fingers and thumb were absent, looking as if they had been amputated. She has lived abroad most of the time since the divorce. I saw her in London in August last, for the first time in several years, and examined the hand of the boy, now fifteen years old, an unusually bright and clever lad. In reply to a question from me, which she says I had repeatedly asked in the infancy of her child, she assured me that never once during her pregnancy had the thought occurred to her that her child would be born with this deficiency."

Voisin* narrates several instances in which idiocy resulted from moral impressions upon the mother when pregnant.

Van Swieten, whose character for intelligence, honesty, and conscientiousness was irreproachable, has told of a young lady coming to consult him, and she had upon her neck what he thought was a caterpillar, which he at once tried to remove. She told him that it was a mark caused by a caterpillar falling upon her mother's neck when she was pregnant, causing her sudden fright. "I examined this mark," says Van Swieten, "and I recognized, beyond the possibility of a doubt, the straight hairs and the color of the insect, and I declare the resemblance between two eggs could not be more complete."

The common, long-lasting, and wide existence of a belief in maternal impressions is a strong argument in favor of its truth.

The skeptics assert that the cases adduced to sustain this belief are merely coincidences. The answer is that the instances are too numerous to be thus set aside; then, too, very many cases show an exact correspondence between the alleged cause and the effect.

* Leçons cliniques sur les Maladies mentales et sur les Maladies nerveuses.

But why, it may be asked, do not maternal impressions thus manifest themselves more frequently? For a similar reason to that which obtains in regard to hypnotism; thus, some persons are incapable of being brought under hypnotic influence, while others readily yield. It is not one in every age, not every one in any age, that "dreams dreams and sees visions;" not every one that can be poet or painter, statesman or soldier. The susceptibilities of women differ so that a common influence will differently affect them. The sun makes pictures, but there must be the sensitive plates, properly prepared, for their reception.

But there may be deformities, or "marks," without the history of any maternal impression. The history may have escaped observation or record, and, besides, those who hold to the doctrine of maternal impressions never assert that they are the causes in all cases.

But similar anomalies may occur in the young of inferior animals. Well, who that has observed animals, especially those that are highest in development and nearest man, claim that mind is the prerogative and possession of man only? Nay, rather, will he not acknowledge that there are distinct mental manifestations on their part?

But we do not know how the effects are produced, for it must be admitted that, as yet, no satisfactory explanation, whether appeal is made to arrests of nutrition, to changes in the blood, or to nervous action, has yet been given. It is foolish to reject everything which we do not understand; there are various other questions which we cannot answer, and yet our ignorance of ætiological relations does not justify us in rejecting facts. As there is a "path which no fowl knoweth, and which the eagle's eye hath not seen, the lion's whelps have not trodden it, nor the fierce lion passed by it," so there may be psychical influences, swift spiritual powers, which do not have their paths in blood-vessels or in nerves. One day the progress of science and the perfection of intellect may be so great that the mode in which maternal impressions act upon the fœtus will be as clear as the marvels and the mysteries of the electric telegraph and telephone.

Our knowledge is little, our ignorance is great. One might have seen, half a century since, or even less, in some of what were then called the Western States, a primeval forest, entered by an immigrant, who, after selecting a location, cuts down some trees, builds a cabin and stable with logs, and prepares a few acres for cultivation. He has made what was known as a clearing, a very small space in comparison with the thousands of acres occupied by tens of thousands of trees and dense thickets, and untrodden by the foot of man, which surround him. And so it is with man's knowledge, for he has only made here and there a little clearing in the vast forest which he may one day possess.

The recent discoveries by Tesla as to the power, the modification, and the modes of transmission of electricity suggest that all knowledge hitherto acquired has only brought us to the threshold of a vast temple of science relating to this marvelous force, which will one day be entered and its mysteries become fully known. Indeed, some of Tesla's experiments suggest the possibility of this force being some way concerned in the phenomena we have been considering, for these experiments prove that according to the number of oscillations it may be transmitted without wire, may enter the body without pain, or may pass through vulcanite as readily as light through glass.

When we remember that physical, intellectual, and moral characteristics are transmitted through a long series of descendants, nay, that some of these may cease during one generation, reappearing in the succeeding one, and that the only material means of transmission are microscopic bodies measured by thousandths of an inch, our faith in maternal impressions as possibilities will be increased rather than lessened.

"I will praise Thee, for I am fearfully and wonderfully made," exclaimed one of the noblest of the old Hebrew poets, and then declared the process of evolution of the child in its mother's womb, under the All-seeing Eye and according to a divine plan. Fearfully and wonderfully made does not apply alone to these bodies, but also to the subtler psychical influences that act upon them in their evolution, unseen by human eye and unexplained by human reason.

Boils and Abscesses in the Axillary Region: How to Treat and How Not to Treat Them.—A somewhat painful and exhausting personal experience of the above affection has suggested the idea of writing briefly on the subject. The illustrations to these remarks will be chiefly from my own case.

It seems one of the easiest tasks in surgery to open a boil or abscess. A touch of the knife, and the thing is done. The theory of how and where to open them is generally understood by most native licentiates, and yet

in practice how frequently do surgeons find in their hands the results of the confused judgments and injudicious treatment of many of their brethren.

One meets again and again with examples of the inability at an early period to recognize the presence of pus, the opening into and setting free of which would have saved the patient weeks of suffering. Then, how often do we find patients presenting themselves with a sore, the surrounding skin thoroughly undermined and lifeless, from the boil or abscess having been allowed to burst of itself. This state of matters is common to abscesses situated in all parts. And especially in the axilla we have not only the danger of lateral extension, but we have a region in which burrowing — upwards and inwards, backwards and forwards — takes place with astonishing rapidity. Pus has been known to burrow into the neck, down to tbe anterior mediastinum and along the border of the latissimus dorsi from this region. While facilities for extension are afforded by the different layers of fascia, an important factor is to be recognized in the pressure of the arm against the chest wall. Whether in a sling or bound to the side, in walking, standing, or sitting, the lateral pressure cannot be avoided.

And so, while for superficial abscesses the sling suffices, for those situated deeply until the abscess has been opened and the pus evacuated, the ideal position is one in which the arm is almost at a right angle to the chest, the patient meanwhile lying on his back in bed. In such a position the pus, if it burrow, will tend backwards, away from the nervous plexus and great vessels, in the direction of least danger.

It is thus of the utmost importance that abscesses beneath the fascia should be early recognized, and, as soon as the diagnosis of pus is assured, they should be opened. In my own case two small swellings appeared near the apex, separated by a little space of unaffected skin. I happened at the time to be staying with a medical man, an M.D. of a Scotch university. They were so situated that the only sight I could get of them was their reflection in a mirror. The opinion of my friend was that there was only inflammatory thickening and no pus, and this opinion was held firmly, followed of necessity by the line of treatment adopted, namely, non-interference surgically. At length I was so convinced of the presence of pus that I betook myself to a skilled surgeon, who at once opened both. Later on I found that not only had pus been present, but in the short time the two had burrowed upwards and met internally, forming a fistula which had to be cut open before healing took place. In deeper abscesses a guide to the presence of pus is found in a localized œdema of the skin, indicating the spot towards which the abscess is tending with the view of opening itself. This is to be distinguished from the erysipelas which is a common accompaniment of the deeper abscesses and an attendant on the lymphangitis of the arm which precedes the formation of the abscess. This œdema yields readily to pitting. When the constitutional and subjective symptoms of abscess are present and this limited rounded area of swollen œdematous skin is seen or felt, then we may be sure that it is time to apply the knife. A timely incision at this stage may save the patient months of the worry and trouble of a slow-healing sinus. I have, on occasions, relying on the above signs, cut in to the depth of a dissecting scalpel before finding the pus, yet I have never failed in these cases to find it.

Certainly in these abscesses one has to know whither he is cutting; still, with the arm out from the side and the point of the knife turned away from the arm and toward the chest wall, there is little risk in thus cutting down on those deep abscesses. The pus is generally reached on the inner side of the layer of fat through which the abscess is preparing to force its way, and, once the abscess cavity is reached, a pair of dressing-forceps to enlarge the incision made by the knife finishes the operation and gives the patient relief.

Until the abscess is seen glistening through the skin, many withhold the knife. This method is encouraged by the patient suggesting in plaintive tones that it is not *pakgaya;* another reason for holding back the use of the knife is the thickness of the skin. This I have heard put forward as a plea, more especially by our native brethren. On further questioning several, after demonstrating to them that the time for opening the abscess had arrived, I find that this thickness of the skin is a sign of unripeness and throws a doubt in their minds as to the fact of pus being formed and present. I need hardly say that the plea of thickness of the skin is a more urgent reason for early incision.

Another reason is frequently advanced, which also is strengthened by the entreaty of the patient. The patient is considered to be too weak to bear the knife. This, after all, is the plea of the sympathetic. The argument, however, goes all the other way. Until the abscess is opened, so long will suppuration go on, still further weakening the patient, and so by early incision we are putting the patient in the position best fitted to regain strength.

A word need only be added with regard to boils. Even in small and superficial boils the free exit of the pus by the knife is cleanlier, quicker in the after healing, unattended with the risk of undermining of the skin, and in all respects preferable to painting them with caustic, applying resin plasters, or poulticing them with any concoction, native or foreign, which has ever been vaunted. The fear of opening too early seems in the case of many to be a real one. On this point we may remark that this is an error that is very rarely made, and the cases where incision has been delayed beyond the period which would bring most benefit to the patient are out of all proportion to those cases in which the opposite error is seen. If such a rare thing happen, the incision, by relieving tension and congestion, will afford marked relief to the patient, and may, as in the case of periosteitis and osteitis when an early incision is made right down through the periosteum, prove sufficient to prevent suppuration. If pus be forthcoming, warm fomentations will generally be found efficacious in keeping open the incision until the abscess drains itself through it.—Wm. Huntley, M.A., M.D., in *Indian Medical Record.*

Catarrhal Gastritis.—From an article on this subject by Harold N. Moyer, M. D., in the Medical News, June 11th, we abstract the following suggestions as to the successful treatment of seventeen cases:

In catarrhal gastritis the stomach secretes an excessive quantity of mucus. As soon as the food is ingested, it is at once coated and prevented from coming in contact with the stomach-wall. The result is that the stomach is not supplied with its normal stimulus, and both the secretion and movements of the organs are lessened. What secretion there is cannot readily reach the food; in consequence, in the absence of the antiseptic power of the gastric juice, the food ferments, gases are formed, and vomiting takes place. The prolonged retention of food and the irritation react to increase the inflammation and congestion of the organs. This morbid cycle, once set up, perpetuates itself with ever-increasing intensity.

The plan employed in treating the seventeen cases that form the basis of this paper consisted in the administration of hot alkaline water before each meal. Sodium bicarbonate is added to the water in the proportion of ten grains to the pint. Of this solution eight, twelve, or even sixteen ounces, according to the severity of the case, are administered at least twenty minutes before each meal. The water should be as hot as can comfortably be borne, and should be taken slowly. By this means the stomach is effectually cleared of its contained mucus, and is prepared for the reception of food. This should consist of a test-meal of from four to six ounces of steak, preferably broiled, with from two to four ounces of bread, thinly buttered. From this starting-point the diet should be increased or decreased as the patient does or does not suffer from nausea or vomiting. The central idea of the diet in these cases is to restrict it largely to proteids, such as lean meats, oysters, and eggs, together with a small quantity contained in the thinly buttered bread. This is a matter of importance because of the readiness with which starches and fats undergo decomposition when gastric digestion is delayed. When the quantity of food that the incompetent organ will digest without leaving a residuum for fermentation has been ascertained, it should be held for a few days at that point and then gradually increased. As the inflammatory condition subsides, the organ gains strength, and the diet may be increased and made to include a greater variety of food. It is doubtful if anyone who has ever had a chronic gastritis should be allowed to eat mince-pies, tarts, plum-puddings, or other culinary abominations. Bismuth, cerium oxalate, nux vomica, and the bitter tonics are useful adjuvants in treatment.

I do not think that pepsin is of any value in the treatment of chronic catarrhal gastritis. I do not wish to be understood as decrying the value of pepsin in certain stomach disorders, notably those attended by atrophy of the gastric tubules, or other structural alteration. Pepsin is also useful in the cases of catarrhal gastritis dependent upon anæmia, nephritis, and other disorders in which the primary trouble is due to failure of gastric secretion from a deficient or poor blood-supply. In these cases the agent may prove invaluable, but, in my judgment, the dose usually employed is much too small. It is in the uncomplicated inflammations that I regard pepsin as valueless; the indigestion is dependent on an entirely different set of conditions.

Relapses are exceedingly common; in fact, they occurred in every one of my cases. They are to be met by a return to the treatment, if it has been suspended, or to a stricter and lessened quantity of food. In the course of the treatment the relapses will occur less frequently, they will be less severe, and will yield more readily to the remedies employed.

The results in the seventeen cases were excellent; eight of them recovered, remaining well at least six months after suspending treatment. Of the remaining nine cases, all were improved, and some of them could be considered recovered, as they passed from under observation completely relieved, but I had no opportunity of learning their condition some months after suspending treatment. In no case was the treatment persisted in for some weeks without marked improvement being noted.

In conclusion, allow me to say that the method of treatment here outlined is of little or no value in cases of tumor, stricture, atrophy of the gastric tubules, or other gross alterations in the structure of the stomach, or when there is marked dilatation. In cases complicated by heart, lung, kidney, or liver diseases, or by anæmia and neurasthenia, the method may be a useful adjunct, but we can hardly expect a cure. It is claimed that it meets the indications in simple catarrhal gastritis quite as well as lavage, that it is much less trying to the patient, that it is adapted to the poorer classes and to dispensary patients, who in many instances are unable to afford even the small expense of a stomach-tube.

Treatment of Phthisis by Creasote and Guaiacol.—Dr. F. P. Kinnicutt, in delivering the Middleton-Goldsmith Lecture for this year in New York, chose as his subject "New Outlooks in the Prophylaxis and Treatment of Tuberculosis." He considered very carefully the various methods of treatment which had lately been introduced and gave his experience of those he had tried. One of the most interesting series of records is that of those cases treated by creasote and guaiacol. Dr. Kinnicutt wished to test the practicability of employing a very large daily dosage of the creasote preparations and to determine, if possible, any advantage which this method might possess over their use in smaller quantities. Several of the patients selected for this treatment presented in a well-marked degree many of the symptoms —namely, hectic sweats, etc.—attributed to the toxic influence of the products of the bacillus, and were therefore well adopted to test the effect of creasote upon such manifestations. A tabulated report is given of seven cases which were treated with subcutaneous injections of guaiacol, rapidly pushed to a daily dosage of one gramme, and five cases with creasote by the mouth, also rapidly increased to six grammes daily. In four of the former cases there was little, if any, appreciable change in the physical signs of disease. In one of them, however, the general condition greatly improved and there was a gain in weight of eight pounds; in one the weight decreased by one pound and three-quarters, in one there was a loss of four pounds, in one the weight remained stationary; in the three remaining cases there was a progressive increase of the pulmonary lesions. No influence upon hectic sweats, when present, was observed. Night sweats, however, affected favorably. In a single case suffering from chronic nephritis (confirmed by necropsy) a marked increase in the albuminuria was observed when a daily dosage of one gramme was reached. The treatment was then discontinued and the albuminuria gradually diminished. In no other case treated either with guaiacol or creasote did any trace of albumin appear in the urine, although examinations were made every other day. In a single case, where the maximum dose of guaiacol was reached, the urine became dark in color and very similar in appearance to urine containing carbolic-acid products. In the cases treated with creasote two exhibited no appreciable difference in the physical signs. In those there had been a gain of one pound and a loss of three pounds respectively. In the three remaining cases there was a progressive increase of the lesions. The effect of a very large daily dose of creasote upon hectic sweats corresponded to that noted in the use of guaiacol. Entire tolerance of six grammes (over one and a half drachms) of creasote was exhibited by three of the five patients. One complained of slight gastric discomfort when a daily dose of five grammes was reached. Carbonate of guaiacol was also tried. In addition to possessing the advantage of being tasteless and odorless, it seemed to have a beneficial effect on the appetite. The conclusions which Dr. Kinnicutt formed from a careful study of these cases were: That both creasote and guaiacol in certain forms could be given in very large doses with entire tolerance and without injurious effect; that such doses apparently possessed no advantages over much smaller ones and had no greater effect upon hectic and night sweats; that subcutaneous injections of the drug possessed no advantages over administration by the mouth; that whatever beneficial influence creasote might exert in pulmonary tuberculosis could be effected with a comparatively small dosage; and that favorable results could be expected only by its continuance and prolonged employment.

Fig. 1.

Fig. 1.—Shows condition of arm before operation. An idea of the amount of infiltration of the tissues may be obtained by observing the great increase in size over the other arm.

Fig. 2.

Fig. 2.—Shows the amount of thickening of the tissues and the nodular processes in the periosteum. At the wrist joint there was not a single tendon intact, and the bone was completely honeycombed.

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Original Articles.

A CASE OF OSTEO-ARTHRITIC TUBERCULOSIS.

BY CHARLES H. MERZ, A.M., M.D.

The anatomy and histology of normal bone will not be attempted in this paper, except with brevity. It is sufficient, perhaps, to recall the fact that the selective tendency of microbic organisms for one or the other extremity of a bone depends largely upon the fact that the medullary substance in close proximity to the epiphyseal cartilages —where there is a maximum of blood supply and of transitional changes, and where the capillaries are only excavations or imperfectly developed sinuses—constitutes a condition peculiarly favorable for the concentration and rapid multiplication of organisms.

It is said that the marrow is "predisposed to collect and retain germs, and is most sensitive in its reaction." Whatever may be the course of these cases, we do find that in children who have inherited any form of constitutional taint, be it syphilitic, tuberculous, or other, there is a diminished power of resistance to the action of pyogenic organisms that may have gained admission into the system; and we not infrequently find them predisposed to osteo-myelitis.

According to Marsh, in his "Diseases of Joints," there are three situations that furnish a favorable point for the accumulation or localization of microbes—"immediately subjacent to the cartilaginous disc; in the vicinity of the ossifying centre; in the line of union between the epiphysis and diaphysis." Usually we find that the process will appear in two ways—either as an "independent affection of the shaft of a long bone, preferably in the vicinity of an epiphyseal line; or it is a deposit in the epiphysis itself, which, by extension and perforation into the joint, may cause tubercular arthritis; on the other hand, tubercular involvement of the bone may be caused in tubercular arthritis of the synovial type by ulceration of the cartilage, by direct infection of the exposed bone."

The case, of which the annexed illustration (see opposite page) will give a fair idea, was one of a typical nature. The boy, aged fourteen years, is unusually tall for his age; his bones are very large, and the articular ends prominent. He has a fair complexion, and is of a scrofulous diathesis.

In October, 1891, he experienced a sudden sharp pain in the right wrist. This was so severe that he could not use the hand, and from necessity carried it resting across the chest. He says the joint was not stiff, but only painful. Two or three days later a pronounced swelling appeared at the wrist, and gradually extended as far as the elbow. Then a physician was consulted. He advised flax-seed poultices; and a few days later a second physician, called in counsel, advised "extending the poultices as far as the elbow." With this treatment, combined with the liberal use of iodine externally, the case progressed until, in seven days, the wrist joint "opened"—to use the boy's expression. There was a copious discharge of dark grumous blood and broken-down tissue. This discharge continued for some two months, when, at the suggestion of a neighbor, the entire arm was painted with tincture of cantharides, which, of course, only added to the poor boy's suffering. He says the sinus discharged a great deal of pus, but no particles of bone. At times it would close, only to soon break open again. He states that all his life he has felt small lumps in the groins and sometimes in the neck.

On April 20th, or thereabouts, I was called to see him late at night. I made a careful examination, finding the wrist and arm much enlarged, the tissues sodden, the wrist useless, and the hand and shoulder somewhat atrophied. I unhesitatingly gave an unfavorable diagnosis, but agreed to take charge of the case and do all I could to

alleviate his pain and reduce the thickening, with the understanding that he should undergo an early operation should my efforts prove futile. The arm was kept submerged in a bath of hot carbolized water for several days, which plan of treatment had the effect of thoroughly and effectively disinfecting it. A slight reduction in the swelling became perceptible; but, realizing that I had a grave case to deal with, I advised an operation. This was granted, and on April 27, 1892, in the presence of Drs. Calvin, Cook, and Love, I made a free, deep incision on the dorsum of the forearm. The condition that presented itself cannot be described. The entire forearm—tendons, sheaths, muscles, and bone—was disorganized and broken down. I was confident that the process extended to the elbow, and that scraping away the decayed tissue would mean to scrape away the entire forearm.

Without proceeding further, I advised an early amputation, refusing, however, to make it until his family had been consulted. The next day, with their consent, the arm was amputated at the junction of the upper and middle third of the humerus. Every antiseptic precaution was observed. The boy made a speedy recovery, the wound healing by first intention, and the temperature remaining normal the entire time. He was discharged from the hospital as cured, twenty days after the operation.

Since that time his general health has improved, he has gained in weight, and is, in fact, quite another boy.

This case suggests several points of interest and importance. These tuberculous inflammations contain a large amount of infectious matter. They are a most exhausting drain upon the patient's strength. The rule should always be evacuation and cleansing—but under the strictest antiseptic precautions.

Tubercular abscesses, when situated in an accessible vicinity, as was this, should be incised to the full extent and every particle of pyogenic membrane and necrosed tissue thoroughly scraped away until a fresh raw surface is obtained. As soon as possible should this be done. There must be no delay. Early detection and operation are true conservatism. This early detection is often difficult; but the lymphatic habit of the patient, and the swelling, rise of temperature, and pain on pressure will materially assist in forming a correct diagnosis.

The subsequent treatment must provide careful drainage and antiseptic dressings.

Typical tuberculous arthritis is caused by the perforation of an epiphyseal cheesy focus into the joint, or separate infection of the synovial membrane from a distant source. Every pain in the joints of a strumous child should be regarded with suspicion as possibly indicating the loss of cartilaginous covering, and caries of the surface of the joint.

I do not like to say what the outcome of this case might have been had it been subjected to early surgical treatment. I am certain, however, that in this, as in every other case of similar nature, a spontaneous perforation may and probably will be the starting point of extensive destructive processes. Even a careless incision may give equally unpleasant results. If there be any virtue in antisepsis, it is in such cases as these.

The preservation of the function of the joint, while not the least, should be the last, consideration in operating. Had an early operation been made in the case cited, preservation of motion in the wrist would have been a minor consideration could amputation have been avoided.

Langenbesk's dorsal incision and excision of the wrist would have been preferable to amputation, but the advanced condition found as the result of unwise delay will often render anything else than the latter impossible.

Sandusky, O.

A FEW NOTES ON THE CAUSES AND MANAGEMENT OF PROLAPSE OF THE ANUS.

BY THOMAS H. MANLEY, M.D.*

When any pathological condition presents itself to us for relief or cure, one of the first questions which appeal to our reason is: What is the precise character of it? What are its causes and how far are they removable?

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This is particularly germane in the condition under consideration, for the reason that when we consult the authors we will find that they not only fail to agree as to its name, but give varying descriptions of its morbid anatomy. Hence, with one it is *prolapsus ani*, with another *prolapsus recti*, and with yet another *procedencia*, etc. One will tell us that it pathologically essentially consists of an extroversion of the mucous membrane only, while another will inform us that a part of the rectum invaginates, or telescopes, through the weakened anus, and that we have a real volvulus, or introsusception, before us.

Many causes are rehearsed in a sort of perfunctory manner to account for it, though few of them will bear a rigorous analysis. It is said, for instance, that prolapse in the child is due to a general weakened condition. This will not do, for one will find it as frequent in the well-fed offspring of the wealthy as in the half-starved, neglected orphan. Stone in the bladder, rectal polypus, hæmorrhoids, etc., have been cited. Each of the latter is unquestionably an active factor as an *immediate* cause in growing children: but most cases which I have seen in adults of the chronic, definite type have been free from these.

Does the extrusion consist of the mucous coat of the intestine alone; or do we have the tube *en bloc* roll out? If the procedencia is made up of the mucous membrane alone, its treatment should be safe and simple; while, on the contrary, if it involve the bowel entire, it becomes much more serious.

In order to determine what may occur here under abnormal or diseased conditions, our study will be much simplified by a correct appreciation of the composition of the tissues and the structural relations in the ano-rectal region.

In many particulars the rectum, theoretically and functionally, resembles the œsophagus. The latter is a musculo-membranous tube, only intermittently called into action, which, by a peculiar arrangement of its muscular fasciculi, seizes the alimentary bolus and deposits it in the stomach. The rectum is practically a tubular voluntary muscle, which intermittently throws off the residue of digestion and excretion. It is loosely swung in the ischio-rectal fossa—everywhere, laterally and posteriorly especially, embraced by a powerful muscle, the so called *levator ani*, which, however, is capable of exerting powerful compressive force, so that it might with much greater propriety be designated a constrictor than an elevator. As a matter of fact, the rectum does not descend in any degree whatever in the act of defecation. This is easily demonstrable to anyone who will pass the finger up the healthy empty intestine. It constantly elongates, through distention of the longitudinal fibres, but its expulsive force direct is chiefly lateral and circular.

The rectum is closed below by a sphincter muscle, which is invested by integument and mucous membrane. In the male the length of the rectum is from seven to eight inches. Its lower third is only about two or two and a half inches long, and is not covered by peritoneum. This segment is the one which plays so important a rôle in all morbid processes, particularly in prolapse. This lies loosely imbedded in a large mass of elastic fat, to which, through an intervening cellular membrane, it is connected. This is enormously dilatable. The mucous membrane of the rectum is highly vascular, with a smooth and even surface when fully dilated; but when the gut is empty it is thrown into long, deep folds or pleats. The mucous membrane here has but a loose attachment to the muscular coat, so that in every act of defecation it is more or less everted or prolapsed, but it folds inward again under the closing sphincter ani. The venous radicles of the lower rectum are large and numerous, hence the remarkable facility with which fluids are absorbed. The preponderance of circulating fluid in this district is venous. Gravity and pressure partly account for this. The veins here have no valves, and anatomically partake of a dual character, being part of both the general and portal systems.

There is a marked difference between the lower rectum of the male and that of the female. With the former, about an inch and a half or two inches from the anus, anteriorly, we come on the prostate gland and the vesico-rectal septum which separates the intestine from the bladder. There is no such partition in the female, the uterus lying between rectum

and urinary reservoir. In the multiparous or the immoral woman the anterior wall of the rectum may be examined through the vagina, as far up as the commencement of the sigmoid flexure. But in the male the anterior wall of the bowel is free only as far as the prostate gland, into which it becomes practically incorporated, so firm is the attachment. This attachment, however, is no more intimate than is the anterior wall of intestine to the recto-vaginal septum, or the mythical perineal body, of the woman.

The Constituent Elements of a Rectal Eversion or Rectal Hernia.—A certain definite pathological condition must prevail when a prolapse exists.

1st. There must be a diminution or total want of sphincter resistance.

2d. There must be an excessively congested or hypertrophied mucous membrane, an excess of rectal intestine or a morbidly relaxed state of it.

3d. There is, in consequence, the substance forced out of the body.

In other words, the same precise phenomena come into play as we witness in ordinary hernia.

The fundamental cause of what may be properly designated infantile prolapse is undoubtedly an excess of recto-intestinal tissue. We never see this condition in the suckling infant. It is only when he takes the upright posture, and the hæmorrhoidal sinuses become gorged with blood, when the overweighted intestinal walls overcome sphincter resistance, and, in obedience to the laws of gravity, descend in the direction of the least resistance. This theory is entirely in harmony with well-known facts. From the pylorus down, we see, on examination, the various segments of the intestinal canal, varying in capacity, length, and situation. In the process of growth and evolution, we will find nature amply competent to adjust defects and obliterate redundancies. In those cases seen in childhood, there is no other way to account for the immense masses which we see in boys (I have never met with it in female children); for if this were not the case, the bladder must come down in connection with the bowels, which it never does.

I am convinced that the same ætiological factors are in operation in the adult as in the child. It has been alleged that hæmorrhoidal tumors, or piles, favor prolapse in adults. In three very painful chronic cases which have come under my care, none suffered from piles. There was a great thickening of the mucous coat and the submucosa in all. In one woman, the worst of all, although the deeply-reddened, corrugated mass was as big as the two fists, which made sitting impossible and locomotion difficult, it consisted wholly of mucous membrane. The rectum had not left its moorings.

I have seen no instance in adults in which the entire intestine has slipped through the anus; but that such is occasionally the case is attested by many eminent authorities. I saw a specimen which incontestably proved this, in the Pathological Museum of St. Thomas' Hospital in London. It had been irreducible for several years before the death of the patient. In our time it would have been promptly and radically dealt with by a safe and simple surgical expedient, though Brodie and Guthrie, the greatest surgeons of their time in England, could give the patient no relief.

(*To be completed in September 10th Age.*)

THE PROPOSED TREATMENT OF SCROFULA WITH CREASOTE.*

BY DR. JULIUS SOMMERBRODT.

For many years, in intercourse with my colleagues, I have often and warmly recommended, on the basis of definite observations, the employment of creasote in scrofula. As early as 1887, in my first report on the treatment of pulmonary tuberculosis with creasote, I wrote: "Proceeding from the established identity of scrofula and tuberculosis, I have recommended the creasote treatment likewise with young persons with large glandular enlargements of the throat without pulmonary or laryngeal disease, and have repeatedly observed these enlargements diminish and even disappear, though, as we all know, they present an extraordinary resistance to all medicamental treatment.

*Translated by Joseph Helfman from Berliner klin. Wochenschrift.

I am unaware whether in consequence of this hint anyone has methodically employed creasote in the treatment of scrofulous affections. But, as my conviction that the curative value of creasote becomes more certain the earlier the tuberculosis (especially of the lungs) is treated therewith, has strengthened, the more zealously have I used every opportunity—which, be it said, did not frequently occur—to give creasote to scrofulous children as well.

The results achieved have been so favorable that I consider it timely to most strongly urge that my colleagues give the subject their attention and determine by exhaustive experiments the value of creasote in the treatment of scrofula.

I have had no experience with respect to the possibility of giving creasote to small children up to six years of age, as all my cases were those of children bearing ages of seven and upwards. I believe, however, that pure creasote will be available without any addition of milk or wine, especially if we begin by administering one drop thrice daily, gradually increasing, *i. e.*, after a couple of days, until we have reached ½ to ¾ grain per day. With children of seven years and upwards it is easy to reach a daily dose of one gramme in 8 to 10 days—by administering the creasote in drops, and also in capsules of 0.1 creasote each with cod-liver oil (not balsam of tolu). It is seldom necessary to exceed one gramme daily, but it should be used according to circumstances and without hesitation. What I have hitherto always emphasized—that creasote must be given exclusively and immediately after the three principal meals, because it is not well borne by the empty stomach—applies of course to children, without any qualification; also, that the creasote treatment must be prolonged for many months, or, in other words, long beyond apparent cure.

My experience is confined exclusively to scrofulous children who have undergone *no* other than the creasote treatment, wherefore I can assert with all the more vigor the value of this medicamental treatment by creasote. Naturally, the benefit will be all the greater if the customary methods of treatment are combined with the foregoing: baths, life on the sea-coast, the use of iodide of iron, surgical measures, etc.

I must again expressly give warning against too small daily doses of creasote—caused in many cases by the clinging but unfounded dread lest the medicament do injury. The too small doses are worthless; the too large, not dangerous. Despite the fact that everywhere the creasote treatment of pulmonary tuberculosis, and very frequently with large doses in consequence of my repeated urging, now prevails, the very first case of intoxication from creasote has recently been made known, and this was caused only by the voluntary and unmeasured extravagance of the patient.

Dr. Freudenthal, of New York, a very warm advocate of the creasote therapy, publishes in the New York Med. Monatschrift (May, 1892) such a case. A woman, æt. 30, who had used with profit for months 2–3 grains creasote per diem, had taken 9 to 10 grammes of creasote in liquid form *within two hours*. She soon became unconscious, gave the impression of one narcotized, pulse 128, respiration 30, intense trismus, lips cyanotic, pupils contracted without reaction, sensibility and reflex movements inappreciable, tracheal rattling, urine bright-colored. After nine hours the patient awoke without any feeling of illness, and in the subsequent course of the disease no after-effects of the intoxication were observed, whilst the rational use of the creasote was continued.

This case shows that the doses recommended by me (Therap. Monatshefte, July, 1889; Berlin. klin. Wochenschr., 1891, Nos. 7 and 43), viz., 1¼ grains per diem (with children ½–1½ grains), are at all events far within the limits of injury from the use of the medicament.

I can, moreover, prove that even double the maximum dose recommended by me may be given with benefit to the patient, for this year I have seen a patient, 30 years old (Dr. Kloidt in Schreiberhau knows the case), after gradually ascending from one gramme per diem, take *8 grammes daily for months* in capsules of 0.1 with cod-liver oil, the appetite and general condition remaining excellent, the local tuberculous process in the lungs and pharynx being favorably affected, and the weight increasing 30 lbs.!

If the observation of Dr. Freudenthal, of New York, is correct, to the effect that large

doses of creasote are not so well borne if the invalids remain in their rooms after taking, the prospect of effective execution of the creasote treatment in hospitals will be diminished, unless opportunity be afforded the inmates to enjoy the open air several times daily, or the ventilation be good. In Munich these requirements are visibly fulfilled, for Privy Counsellor Prof. von Ziemssen wrote me recently: "At this opportunity I would not fail to observe that the creasote treatment is performed in my clinic with the best results, thanks to your investigation, and that all our patients now take 3.0 creasote *pro die* and bear it well (with few exceptions)."

When Dr. Cornet refers, as he puts it, the "unquestionable success of creasote" to its possible influence in combating the micro-organisms which condition the mixed infections of pulmonary tuberculosis, and not to its influence upon the tuberculosis, I must most assuredly protest against this theory; for, otherwise, creasote would prove of special service in genuine lung phthisis resting upon a tuberculous basis, whilst, in fact, it effects less in such cases, and achieves its best success, perhaps, more in initial tuberculosis, to which scrofula also belongs and in which there can be no talk of mixed infections.

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LIQUOR SEDANS IN DYSMENORRHŒA AND MENORRHAGIA.

BY DR. J. S. MCLAIN.

Case 1.—Mrs. McC., 36 years of age, has been a sufferer from painful and difficult menstruation for several years past. Is in general a large, well nourished woman, her health usually good save just before and during the monthly flow.

She dates her trouble from about the time of weaning her last child, now seven years old. Her last labor necessitated the employment of forceps, which induced slight laceration of perineum, for which an operation was not deemed necessary—a conclusion fully justified by the result, as it healed under the influence of simple dressings. Since the time above mentioned, her periods have been more and more distressing—indeed, with each recurrence (so she declares) more painful than the period preceding, causing her to regard the time of the catamenia with dread.

She had been treated by two gynæcologists, and taken unlimited quantities of uterine tonics and sedatives, but at best with only temporary relief. There was slight uterine prolapse, with manifest catarrhal endometritis.

Pain and uneasiness always preceded the arrival of the mensem and continued throughout the flow, a period generally of six or seven days. The preliminary manifested itself usually from forty-eight to sixty hours before the flux, being accompanied by considerable suffering in the region of back and groins, and frequent desire to micturate, with but slight resultant fluid. These discomforts would be somewhat relieved when the period was fairly established.

The patient was being treated by me surgically for an entirely different trouble when the foregoing history was elicited. In an endeavor to afford relief I ordered Liquor Sedans to be taken, a teaspoonful the first day, double the quantity on the second, three teaspoonfuls on the third, continuing daily the latter dose until the period had passed.

April 29th, the customary preliminary suffering in the way of pain in the back and groins, with cramp in the lower part of abdomen, being definitely established, under a misapprehension as to directions Mrs. McC. discontinued the remedy after the morning dose. Headache, debility, and frequent micturation were complained of, "about the same as usual;" but the flow, she declared, was less copious, though persisting the same number of days. She expressed the opinion that if she had understood directions and consequently continued the Liquor Sedans throughout the period, she "would have gotten along much better."

I now ordered the remedy to be taken continuously during the interim, a teaspoonful twice daily, the dose to be increased by a third daily spoonful in the week preceding the time for the next monthly.

May 27th there was some show of menstrual blood, with much less preliminary pain, the latter moreover persisting for only

about eight hours prior to full establishment of flow; headache was slight, cystic symptoms greatly improved. Further, she was able to be up and about the house during the greater portion of the period, which persisted only four and a half days. Heretofore she had been confined to the bed during the entire "time." The remedy was ordered continued as before.

June 26th Mrs. McC. reported she had passed through her "time" without the least discomfort; the whole period only occupied three days. A leucorrhœal discharge that annoyed at times had wholly disappeared, and she declared she felt as she "did ten years since, before the uterine trouble began."

Case 2.—Mrs. Mary G., 46 years, mother of two children aged respectively 17 and 19 years. Catamenia first appeared in her eighteenth year, and up to the age of 39 was always regular, with no trouble of any kind. Both labors natural; no miscarriages.

Seven years ago, at the time of the regular flow, and without any warning or known cause therefor, she experienced an attack of menorrhagia, losing large quantities of blood. The attack reappeared on three successive occasions, whereby she was greatly reduced and health impaired; the family physician assured her it was the initiative of the "change of life," and that the discharges would gradually decrease in both quantity and persistence until they ceased altogether. Tampons were employed to control the hæmorrhage, and "some drops" administered; still it was not until the fourth month that the flow lessened, since which time she has suffered with dysmenorrhœa and "irritable uterus." The flow has always been scanty until the second day, then increases in amount with some corresponding relief.

The cause being removed, the tendency of the condition known as "irritable uterus," and its many consequences and results, is to restoration of previous good health, except, as Professor Hodge observes, in those women "who, while they are suffering from irritable affections, have inflammatory or febrile diseases superadded to their old complaints." Three years ago, upon the occasion of the first visitation of the Russian influenza epidemic to this country, Mrs. G. was one of its earliest victims in this city, having a rather serious attack, during which the hæmorrhages again appeared and continued for some months, but were, a second time, controlled by the tampon. The following winter, having scarcely recovered from the attack of the previous year, influenza seized her again, and she was very ill, the loss of blood per vaginam being constant and, to employ her own words, "something awful." She has never been well since this last attack, and May 28, 1892, I find her condition as follows:

Pale, anæmic, emaciated—from a strong, healthy woman of 160 lbs., has been reduced to 106 lbs. Constipation, persistent for some years, has latterly been greatly relieved by the use of cascara sagrada; the bowels are now acting freely with only an occasional dose of the medicine. Headache and vertigo obtained during periods, and pain in back and loins, with almost constant desire to micturate; no leucorrhœal discharge. A dry metallic cough, paroxysmal in character, manifests itself usually after some extraordinary exertion of body or agitation of mind, which, owing to the absence of all physical signs, I attribute to reflex from irritated uterus. Catamenia comparatively regular as to date, both previous to and since the attacks of influenza, but she fancies the suffering is more acute with every second month, and the discharge more copious, hence looks forward to each intervening period with the consoling thought it will show some abatement of misery.

For some weeks I have had her under general treatment for the various conditions of anæmia, debility, chronic constipation, etc., and, on her announcement the next mensem was due June 8th, June 1st I ordered a teaspoonful of Liquor Sedans to be taken four times daily, in a little water, up to and throughout the continuance of the flow.

I was absent from Washington in the interval between July 4th and 19th, but on my return Mrs. G. was one of the first patients I called upon, and a woeful tale she had to relate. Having always heretofore been regular, and confined to her bed for several days, she made all preparations for the usual siege, and retired to her couch on the 7th. On the

morning of the 8th, being free from pain, and discovering no evidences of flow, she became demoralized, "feared it might go to her head," and so discontinued the medicament. That same night she was taken with excruciating cramps, pain in groins and loins, severe back-ache and head-ache, with considerable disturbance of stomach, all of which persisted for twelve hours: then the flow appeared most profusely, lasting three days—the only redeeming feature of the occasion being, she recuperated more quickly than for years past, and altogether felt better after the flow than she could remember feeling for a long time.

She was again ordered Liquor Sedans, and I did not see her again until the morning of July 8th, when I was summoned to prescribe for a "curious pain" under the left breast. Otherwise her condition was excellent.

As a precautionary measure she had remained in bed the day before, as upon awakening that morning she had discovered a mere "show," scarcely sufficient to stain the linen; but there was no evidence of ache or pain. The discharge continued three days without any apparent augmentation, and then ceased. The sympathetic soreness and pain under the breast yielded to external applications of a few hours' duration, and this was the only discomfort experienced.

The return of the period in August will be looked for with interest. My impression, derived from the above narrated facts, is that, the sensitiveness and irritability of the uterus being apparently allayed, and the patient having reached the period of the menopause, the menses will cease to appear as the months advance, and the hope she has entertained so many years, that her menstrual troubles are at an end, will be fully realized.

My purpose in narrating the above cases is, more particularly, to call attention to the practical fact that both women—one through ignorance and the other through fright—ceased taking the remedy at the *most important time*, viz., just as the event for which it was prescribed was about to recur! And both suffered during the period almost as much as on any preceding occasion; while at the next ensuing monthly—the Liquor Sedans having been taken during the interim and continued through the flow—one was greatly improved, while the other scarcely suffered at all.

Washington City, 1924 "N" Street.

MECHANICAL SUPPORT IN FRACTURE AND DISLOCATION OF THE SIXTH CERVICAL VERTEBRA.*

BY H. AUGUSTUS WILSON, M.D.†

Gentlemen:—I have the pleasure of bringing before you to-day a profound mechanical problem, which is, in addition, a thoroughly unique one. I venture to say that this is the first time such a case has been presented before a clinic. Dr. H. E. Hadra, of Galveston, Texas, who had charge of the man, read the report of the case at a meeting of the Texas Medical Association. In order that you may understand the case perfectly, I shall read you a brief abstract of his history, as presented at that time.

"To give a short history of the case, it may be stated that a man thirty years of age, working as a waiter in a restaurant, fell to the floor, striking with great force on his buttock. Immediately after, he felt intense pain in his neck, and was unable to move it. On examination, the sixth cervical vertebra was found pushed forward and turned around its vertical axis to the right, whilst the spinous process of the seventh vertebra appeared unusually prominent. Patient could not open his mouth more than an inch; from what cause I could never understand.

"Extension was made by the head, and, as the parts seemingly returned to their normal position, the neck was put in a firm cravat.

"Patient, from reasons of no medical interest, left the St. Mary's Hospital (Galveston, Texas) a few days after his admission, and returned to his former occupation, wearing constantly his apparatus, getting along well enough with an occasional hypodermatic injection of morphine. But once, when he imprudently bent his neck in a rapid and forcible way, the cravat having been left away, he fainted, and on recovering could not stand upright. His head and neck were turned to the right and kept perfectly stiff; right hand became numb, right arm

*A clinical lecture delivered at the Jefferson Medical College Hospital.

† Clinical Lecturer on Orthopedic Surgery.

weak; girdle pains around his upper abdomen; bladder not fnlly under control; slight priapism. In such a condition he came to the John Scaly Hospital on November 1, 1890, ten months after the first accident. His face flushed up on the slightest provocation; his mouth could not be opened over an inch; the left portion of the trapezius muscle was hard and protruding, forming a tumor; his right hand colder than the left; extreme hyperæsthesia on the right side; head was rolled around to the right, and the vertebræ in same position as on the first observation; muscles, though, reacted alike on both sides of the body to either current. Patient was put under chloroform, not being able to stand any manipulation without an anæsthetic. Head and upper portion of neck very movable, and crepitation distinctly heard. Reduction was easy, and the stiff cravat was applied again. In spite of frequent adjustment and modification of the retaining apparatus, patient grew speedily worse. Pains in back, arms, and around abdomen became unbearable, and walking impossible. He was in such a pitiful condition that he insisted upon any operation which would give the faintest hope of relief. I finally consented to cut down on the place of injury, which I did on December 22, 1890 (thirteen months after injury). My plan was to remove loose bones, if present; to sever the posterior ligaments, if they should be thickened and contracted; and finally, to wire the spinous processes, in order to steady the vertebral column.

"From the improvement setting in every time the bones were well adjusted, I inferred that there was no serious change within the vertebral canal, nor in the cord itself. I therefore did not consider the opening of the canal called for. Not finding loose bones, I severed the ligamentum nuchæ and the interspinous ligaments transversely in several places, so as to expose the spinous processes fully, and also in order to remove the interference of the perhaps thickened and contracted ligaments which could have acted as an impediment to the replacement and retention of the dislocated parts, exactly as in other fractures or dislocations.

"I am satisfied that this part of the operation was not only unnecessary, but that it caused all the following inflammatory symptoms, as a good deal of laceration was unavoidable. The main aim of the operation, the wiring of the sixth and seventh spinous processes, was done with silver wire, carrying it four or five times around in a figure-of-8. The wound, which extended from the occiput down to the first dorsal vertebra, was then closed, a small drainage tube inserted right over the place of wiring, and the stiff cravat reapplied. Patient did not improve for several days, but then gradually got better. After come weeks I thought that the wire had become loose, because he began to exhibit some of his former symptoms. He was put under chloroform again, and the wire removed and a new one fixed on. On this occasion it was easily seen that the lower end of the fractured spine slipped away from the upper for about one and a half inches to the right.

"From now on, improvement went on more rapidly. Patient was able three weeks ago (that is, twelve weeks after the operation) to move his head in a normal way in every direction without pain. He could open his mouth fully, walk as well as anybody else; no headache; no trouble with bladder or bowels. The right arm remained somewhat weaker, but was otherwise normal in all its functions and of normal sensation.

"The favorable condition, though, made me, I fear, too careless. I allowed him to be without the bandage occasionally, and removed the wire, as it kept a fistulous ulcer from closing. He became worse again, and has now considerable pain in his right arm and shoulder. The spinous process of the sixth cervical vertebra is very tender on pressure, and requires further attention as the probable cause of the new trouble. Otherwise patient is well and can make use of his neck without any difficulty.

"This is my case, which shows that the operation (wiring fractured vertebræ) is feasible and effective. But I would be a poor surgeon if I had felt satisfied with my method and the course of my case."

This, gentlemen, is the early history of our case. The history subsequent to this, and since he came into the hospital on September 21st, has been made by Dr. E. W. Egan, our resident physician.

The patient is a widower. At the age of 16 years, he says, he had chancre, with secondary syphilis manifesting itself three weeks later. Five months later had lumps on his head, and severe pains in arms and legs which were always relieved by potassium iodide.

Since his admission to the wards of Jefferson Hospital, on September 21, 1891, he has suffered from pain in cervical region, with dull, numb sensations in occipital region.

He on one occasion, while walking across the floor at night, fainted and fell. On several occasions the spinous process of the seventh cervical vertebra has been noticed to be unduly prominent, and at this time there is more severe pain diffused over the entire body. The reduction of this undue prominence by a peculiar manipulation is always followed by a cessation of his pain and discomfort.

Professor John H. Brinton, M.D., the surgeon on duty, has referred the case to the Orthopædic Department for mechanical support, as he does not faver further surgical procedure.

I candidly tell you that we have been unable to explain his present condition, but accept the statements of Dr. Hadra, and we will to-day consider him solely as a mechanical problem—that is, we are required to prevent the motion of the fractured and misplaced cervical vertebræ.

I wish to show you first the condition posteriorly, where you may see the cicatrix produced by the sloughing after the operation described in the history. By this spinal column you will notice how the spinous processes of the cerebral vertebræ are held in position; and you can see how impossible it would be, without cutting away the interspinous ligaments, to pass a wire around the spinous processes (as was so ingeniously done by Dr. Hadra) so as to render them immobile; therefore the necessity for the operation to which Dr. Hadra resorted in order to secure the vertebræ. As to the method he adopted, it may be made clear by this model. Fastening the wire to the spinous process of the seventh vertebra, he wound it around the spinous process of the sixth cervical vertebra in the form of a figure 8. This was an extremely ingenious process, and the operation a very successful one, as is proved by the fact that the man lives in the comparatively comfortable state in which you see him. That he is not entirely well is not due to any failure in the operation, but to the intense gravity of his case and to unfortunate subsequent injury. You will remember that there are no wires attached to the fractured vertebræ now, for the history says that the first wire slipped off, and the second was removed because it kept up a fistulous opening. The man now comes to us because of severe pain in the cervical region, and danger of the slipping of the movable sixth vertebra, which has, I believe, occurred three times in six weeks since he came into this hospital.

Here is an apparatus, such as is ordinarily used in Potts' disease, which permits of the movement of the jaws and of the entire head, and as well lateral and rotary motion of the head to a limited extent, but it allows the head to be flexed and extended. These very movements of the head, which are desirable in certain cases of Potts' disease, in this case will give rise to all of the man's symptoms for which he now seeks relief. The apparatus I have devised especially for this case has been constructed by our apparatus-maker, A. Gustaf Gefoert. It has a firm foundation, resting upon his pelvis, and upon this four upright bands are arranged connecting the minerva or collar. The head rests in this, and not on the cervical vertebræ, and the weight of the head is carried to the pelvis. These bands are arranged with screws so that their length may be adjusted to suit the requirements of any changes that may occur.

As the apparatus is now applied, it will be perceived that he cannot move his jaws, for if he did he would move the occipital region and cause a movement of the vertebræ. Hence we have applied this strap over the forehead, which will hold the head immovable and relieve the chin of all necessity of support. The chin portion is so arranged that it can be dropped out of the way when the strap is in use over the forehead. The chin can move without disturbing the position of the head. He can eat and manage his food, while wearing this apparatus, with the greatest ease. Therein lies the novelty of the apparatus, which is thoroughly original

in design, and I bring the case before you chiefly to impress upon you the necessity of adapting all our apparatus to the peculiarities of the case. The man has entire relief from all his symptoms while wearing his apparatus, clearly indicating the benefit which he derives from its use.

One week later the patient was taken before the class, when the following remarks were made:

He has worn his apparatus constantly during the day, wearing at night a simpler form of collar merely to prevent dislocation and a sudden termination to his existence. He moves about the house at will, and we have put him to work at easy tasks simply to satisfy ourselves of his ability to be dismissed from the hospital. The apparatus has answered every requirement; it has prevented separation of the portions of the broken sixth vertebra; it has caused his pains and other symptoms to entirely disappear; it has enabled him to eat by the application of the head band; and, as I have said, I wish to show you that it has met all the indications of the case. There is one problem, however, which has presented itself. The application of the steel brace from the hips has rendered it impossible for him to stoop. The only way that he can do so is by lowering the whole body, and this, as you see, is attended with considerable muscular tremor. To avoid this, the instrument-maker has constructed for him an elongated finger on the plan of the extension ladder. By means of this he can pick up any object from the floor without bending his body, and when folded he can readily carry it in his pocket.

The prognosis is decidedly unfavorable, and the best that I can hope for is ankylosis of all the cervical vertebræ, and this may occur to prevent his constantly recurring mishaps when he is not on his guard.

Philadelphia, Pa.

NAPHTHALIN IN WHOOPING-COUGH.

BY DR. CHAVERNAC.*

The curative measures recommended for the treatment of whooping-cough are numberless; they may be counted by the hundreds, and their very multiplicity is the proof of the impotence of the therapy of this disagreeable affection, which is the despair of so many families. I do not for a moment purpose reviewing them all; I shall say but a word respecting the newest and most recently employed.

Antipyrin, employed at all seasons and often out of season, received a forced application to this disease. It was administered in the dose of 50 centigrammes to 1 gramme, without brilliant results.

Qninine, after having been employed since 1868 in Germany by Prof. Binz, of the faculty of Bonn, was dismissed and again taken up by Prof. Ungar, of the same school. The latter considers this medicament as the best in the treatment of whooping-cough. In his opinion, failure may be imputed, not to the method of Binz, but to its defective application—too small doses and too short a period of treatment. Ungar administers quinine in doses repeated two or three times a day, and varying according to age—0.05 at 3 months, 0.20 at 18 months, and from 2 to 5 years as many decigrammes as years in the patient's age; maximum dose at 5 years and beyond, but taken in a single dose.

This treatment should be continued until marked amelioration ensues, and the latter should take place at the end of five or six days. This result once obtained, the doses must be insensibly diminished.

But, in the opinion of Prof. Ungar himself, this therapeutic measure is not infallible; there are cases of whooping-cough which prove refractory to it. When quinine is not tolerated by the stomach, the Professor has recourse to quinine lavements and to hypodermatic injections. Complete disappearance of the paroxysms is not observed before the end of fifteen days, but during this time the patients and their parents suffer the torments of the cough.

Dr. Johnson has strongly recommended infusions of common thyme in a fresh state; and Dr. Noevins, who followed his example in a city of Finland during an epidemic in 1888, claims that this measure was not only efficacious, but that, administered in large and frequent doses, it cured almost all cases of whooping-cough in less than fifteen days.

The treatment recommended by Dr.

*Translated by Joseph Helfman, Detroit.

Mohn, of Christiania, leaves the domain of therapeutics and entere into the province of hygiene. Our *confrère* prescribes the burning of 25 grammes of sulphur per cubic metre of the room in which is placed the furniture and the bedding, and the room is hermetically closed for five or six hours. Then open, air five or six minutes, and let the patient pass the night in this room. At first there are spasms of cough, but they are calmed, and the patient falls asleep. If this treatment be continued for several successive days, the disease will rarely persist more than twenty days—a delay by far too long.

Gemmel, of Glasgow, recommends the alcoholic solution of wabain in potion.

Loeffler has used pharyngeal insufflations of chloride of silver, associated with hyposulphite of soda.

Others have succeeded by using caffeine, cocaine, and a plant indigenous to California, *Grindelia robusta*.

Dr. Hellet has lately praised the action of ozone. He caused an inhalation of ozone to be administered a quarter of an hour every day to four children suffering from whooping-cough. The number of paroxysms diminished, the general condition became improved, cheerfulness and appetite returned in a few days. This treatment seems very attractive, but it cannot overcome the objection that ozone is not at command in all places and seasons.

Bromoform ($CHBr_3$), recommended first by Steep, is a clear, transparent liquid, with an odor similar to that of chloroform, and with a taste at first sweet and then acrid. Slightly soluble in water, it is much more so in alcohol and ether; it must be stored in a hermetically sealed bottle to avoid decomposition.

The Americans and the Germans prescribe 1 to 5 and 6 drops of it, according to age, three times every twenty-four hours, and all have conceded that 8 to 15 days are required to cure whooping-cough in this manner.

It is believed that bromoform acts by calming the hyperæsthesia of the respiratory mucous membrane; the hæmorrhages, the bronchial symptoms, and the vomiting are quickly dissipated by its application.. As to its inconveniences, it is said to produce a sensation of somnolence, and to provoke or sustain diarrhœa.

Let us, finally, terminate this retrospective view by inhalations of chloroform water, recommended by Dr. Schilling in the Annales de Gand. He causes to be evaporated two to three times as many drops as the patient has years, and the inhalations are repeated four times in twenty-four hours. But this requires 15 days on an average, often more.

I forego the mention of those remedies which are displayed in large type on the fourth page of the journals, and I hasten to consider a remedy much more simple and practical. For rapidity of cure it deserves particular recommendation. In every instance of its employment by me it displayed remarkable efficacy, and acted, I might say, well-nigh instantaneously. I was led to test it in the following manner:

During the rigorous winter of 1890–91 we had at Aix-la-Chapelle an epidemic of whooping-cough. My oldest son, aged 18, was attacked by it with unprecedented violence. I tried several modes of treatment, but always without success. I was awaiting the Easter vacations, to have him try a change of air, when one day on returning from the Lyceum, or high school, he informed me that the Professor of Physics in an experiment had heated a substance, the vapors of which had suddenly soothed a severe paroxysm of cough, but, as his comrades could not support the odor, the windows were opened, and the cough returned. To me this was a precious indication, which it was my duty to investigate.

I procured some of the substance, and with the aid of heat I evaporated about 20 grammes in his room. A half-hour later my patient informed me that his breathing was much freer and that his chest was much relieved. He soon fell into a sound sleep, and throughout the night he had but one slight paroxysm. I arose three times to observe his condition. His sleep was calm, his breathing showed no impediment, and his fasciæ were no longer congested as during the previous nights. The following day, passed at the Lyceum, he was still tormented by several paroxysms, but less severe and especially less painful.

The second night I repeated the experi-

ment, and thereafter there was no more cough or expectoration, which until then had been very profuse. No more whooping-cough!

Did the termination of the disease coincide with the beginning of treatment? I do not think so, for, having myself been attacked three days before, I coughed in spasms like a child, making most painful efforts to vomit. I took speedy recourse to the remedy which had just cured my son. I evaporated some of it in my room at the moment of retiring. I found the odor very agreeable; I felt that the pituitary glands were relieved. The air passed freely through the nasal fossæ and penetrated the lungs without pain; I had a good night. I began again the following day, and on the third day I had no more cough.

Astounded by this double success, I did not hesitate to employ it with my patients, and, used in this manner, it was absolutely inoffensive. With a young lady of 26, and her daughter 3 years old, success was as speedily obtained as with my son—greatly to the surprise of the members of this family (one a doctor), for they all knew how rebellious is whooping-cough to therapeutic measures.

Two brothers—one 4 years, the other 18 months, of age—suffering for a month and 15 days, respectively, were cured of their paroxysms and vomiting. The father, who is emphysematic, was greatly incommoded by these inhalations. Treatment was somewhat longer in this family of working-people, on account of unsanitary lodging. The elder returned to school where many children were having the whooping-cough, but experienced no relapse.

Wishing then to test my treatment on a larger scale, I inquired of my *confrère*, Dr. Castellan, whether in the religious establishments confided to his medical direction there were any epidemic of whooping-cough. He mentioned one in which there were more than thirty sick children or youths. The field was indeed propitious for trial. My *confrère*, with the consent of the Mother Superior, very kindly consented. Under my direction, the experiment was made in the childrens' dormitory on two consecutive nights. The result was unhoped-for. On my third visit the Mother Superior informed me that no one was suffering from whooping-cough in the house. Only, she added, two of the Sisters were incommoded by the vapors from the remedy.

This statement gave me food for reflection, and I asked myself whether, like certain medicaments, mine had not its counter-indications—whether certain pathologic states were not refractory to its use.

The two Sisters were called in, and careful auscultation revealed a manifestly enfeebled vesicular murmur at the summit of one lung in each, prolonged expiration, and, with one, dry, cracking noises after forced inspiration. Here were cases of incipient tuberculosis, in a latent state, unsuspected by anyone—even by the victims.

In the meantime, as a result of a vast phlegmon of the sub-hyoidian region which I had opened and which had suppurated for about a month, a patient, 12 years old, became tuberculous, and her affection proceeded rapidly to a fatal termination. Four times I resorted to the inhalations in the hope of calming the incessant cough which tortured her. I was obliged to suspend them; the young patient could not support them.

These two cases justify the conclusion that pulmonary tuberculosis, latent or confirmed, is a contra-indication to the employment of this remedy. But, on the other hand, the remedy may serve as a means of recognizing this affection even at its beginning. If I have not erred in my inferences, it should be valuable in many cases in removing the difficulties and uncertainties of diagnosis.

New observations will without doubt reveal other applications and contra-indications of this remedy, which is no other than naphthalin.

Where there is whooping-cough, without reference to the humoral, nervous, or microbian character of the disease, I affirm that when it is exempt from any complication it is cured with astonishing rapidity by inhalation of naphthalinic vapors.

If under the influence of this treatment the malady is not cured, one of two things is the cause: There is no whooping-cough, or it is complicated. The more the laws of

hygiene are observed, the more salubrious the lodgings, the more rapid the cure.

I would here mention a test which I made in a case of diphtheritic angina. Inhalations made on the fifth and sixth day had produced complete absorption of the false membranes of the pharynx in all the parts visible and accessible. During an enforced absence I was unable longer to watch the patient, who, unusually stubborn, would do nothing, and died on the tenth day. This remedy is worthy of further trial.

Naphthalin is derived from the products obtained by the distillation of mineral tar. It is to Kidd that we owe its discovery. It is volatile, crystallizes in scales, and has an aromatic odor recalling the lilac's. Insoluble in water, it is, on the other hand, very soluble in alcohol, ether, and the volatile and fatty oils. It melts at 79° C., and crystallizes on cooling. It must be employed in a state of fusion, and care must be taken against burning it, under penalty of obtaining the very opposite effect. In burning it emits a fuliginous vapor of a pungent odor, which provokes cough.

In the sick-room place 15 to 20 grammes of naphthalin in a crockeryware receptacle, on a chafing-dish provided with hot coals, permitting the medicament to heat slowly. It soon becomes fused, and fills the room with its argentine vapors, which to me are very pleasant and beneficial.

Aix-la-Chapelle.

[In the Bullétin Général de Thérapeutique, Nov. 15, 1891, Dr. Garnier, of Lyons, claims that he was the first to direct professional attention to naphthalin as a specific in whooping-cough, and that he published such a notice in the Gazette de Lyon as early as April 15, 1868. He does not, however, question the originality of Dr. Chavernac's investigations, merely asserting the priority of his own.]

THERAPEUTICS OF DERMATOL.

At a meeting of the Spanish Medico-Chirurgical Academy, Azua gave an account of his experience with dermatol. Applied to bloody surfaces it dries them; it stimulates granulations, and is useful in skin affections characterized by much discharge, such as eczema.

Correspondence.

MEETING OF THE STATE BOARD OF HEALTH.

JULY 12, 1892.

Relative to the reported presence of cholera in foreign countries, and the possibility of its being brought to this country, Dr. Baker remarked that it would be a particularly unfortunate time if cholera should soon reach this country, because it tends to spread in much the same ways as typhoid fever, only with much greater rapidity, and typhoid fever is unusually prevalent in Chicago and appears to have been increasing lately in Detroit. If cholera should gain entrance to either city, so many of our people visit those cities that we might soon find the disease spread in many places throughout Michigan. This office is prepared to issue circulars, already printed, advising local health officers just how to restrict cholera.

Secretary Baker stated that, during the quarter, reports had been received and action taken on 451 outbreaks of the dangerous diseases in Michigan, including two outbreaks of small-pox each confined to the first case; 1,091 pages of letter book have been used in copying the correspondence of the office (not including postal cards or printed or hektographed letters)—there were 2,159 pages hektographed, of which 1,068 were notices to health officers, of infected immigrants destined to their localities. During the quarter there had been received, mostly in exchange for publications of the Board, 387 journals (weeklies, monthlies, and semi-monthlies) and 68 books and pamphlets; making the total number 8,229 in the library of the Board (excluding journals not yet bound).

The Secretary presented the subject of infected immigrants, and, to illustrate a point, read a letter from a township health officer stating that he found, isolated, and vaccinated the person of whom he was notified as possibly infected with small-pox; also reporting his action concerning one of the immigrants, of whom he had received notice, who had come down with measles. The expense incident to these cases was about $17. He thought the National Government might go

a step further and detain at the sea-board those immigrants likely to be infected.

The Secretary presented the subject of a "Sanitary Day," after the manner of Arbor Day, Labor Day, etc., which had been proposed in Pennsylvania, where it was designed to have a day set apart for general and special "cleaning up." His opinion having been asked, he had expressed the view that it would be a good thing, but he thought a much more important sanitary day would be such an one as he had proposed at the last meeting of the Michigan Medical Society, namely, one provided for by a law similar to the one providing for the annual school meeting—a sanitary meeting which should determine the amount of money to be raised for public health purposes. This would supply occasion for placing facts, as to the restriction of the most dangerous diseases, before the voters who control the expenditures. School money is voted by the people after the subject has been carefully put before them. The interests of health and life of the whole people, including the children, are of more importance than the school education of the children alone. The health interests suffer because they have not been supported by the people. Dr. Baker believes they would be properly supported if facts were carefully put before the people every year at a sanitary meeting similar to the school meeting in September.

The minutes of the meeting in Detroit of members of the State Board and the Detroit Board of Health and others, were presented, as also additional data obtained by correspondence, tending to show that some of the most dangerous diseases are not being restricted in Detroit, and that this is in some measure due to the absence of a proper public opinion such as is built up in those localities in which the methods of the State Board of Health are accepted and enforced; one important method, not enforced in Detroit, being the distribution, *to the neighbors of houses placarded as infected*, of pamphlets stating the law and the best measures for the restriction of the particular disease then threatening. In time such pamphlets, endorsed and issued by the authority of the State Board of Health, reach all the people, and build up such a public sentiment that the most dangerous diseases can be restricted.

A UNIQUE CASE.

Editor MEDICAL AGE:

About a year and a half ago I was called in consultation with my brother, at East Tawas, Mich., to see a young man whose age was about 25, an only son of wealthy parents. The young man had been sick about two years; and the physicians who had treated him before my brother, pronounced the disease hepatization very complete, also pleural effusion, both on the left side—the right, however, showing fine moist râles. I found, on examination, complete dullness over the entire left lung and chest, and the respiratory murmur entirely absent. The left chest measured three inches more than the right. The right lung was resonant over its entire surface, and showed fine moist râles. The temperature was 102½°, and respiration was 140 per minute. Patient was much emaciated, had chills, and was cachectic. All the appearances of rapid dissolution. The left lung, on percussion, was as solid as old cheese, and the left pleura was distended at least three inches more than the right. Probably no physician, or any number of such, but would have diagnosed the case as above. I told my brother the case looked hopeless, yet we would open the pleura and let out the fluid. We chose the most dependent part and used the trocar and canula, but evacuated nothing but clear, air-like, odorless gas. When the gas was exhausted, the lung immediately filled with air, and the patient commenced to improve, and is to-day a well man. Happy? I should say yes! What was it? Can any give light?

C. L. HOWELL, M.D.

Flint, Mich., July 14, 1892.

AMERICAN DERMATOLOGICAL ASSOCIATION.

The sixteenth annual meeting of the American Dermatological Association will be held at the Pequot House, New London, Conn., Sept. 13, 14 and 15, 1892. For all information address the Secretary and Treasurer, G. T. Jackson, M.D., New York.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

B. W. PALMER, A. M., M. D., Editor.

—Published By—

GEO. S. DAVIS, Medical Publisher, Box 470.

DETROIT, MICH., AUG. 25, 1892.

Editorial.

THE IMPENDING CHOLERA.

The foreign and home journals are devoting grave consideration to the question of the prevention of extension of the impending cholera.

European ports are especially open to its ingress, and the journals are impressing on sanitary authorities the necessity of earnest and painstaking effort to exclude all possible sources of infection.

In our own country the general sentiment seems to be that our efficient sanitary corps will prevent its introduction, by stringency of examination of ariving vessels. Nevertheless it behooves the local sanitary authorities everywhere to see to it that the territory they are entrusted with be properly looked into, and that no unsanitary nuisance be tolerated. Bad drainage and sewerage, impure ice, drinking-water and milk, are prolific sources of spreading cholera, enteric fever, and other infectious diseases which we have always with us.

SIR JOSEPH LISTER.

Many of our readers will be interested to learn how this eminent prophet of antisepticism, unlike other prophets, is honored in his own country. Recently this most distinguished surgeon—whose name is synonymous with modern advance in scientific surgery, and who, by his observations and discoveries in the application of the antiseptic treatment of wounds, has added a lustre to surgery which will never die—has closed his career as a clinical lecturer in King's College. According to the regulations of that institution a professor must, except at the special request of the Council, on attaining the age of sixty-five, resign his professorial duties, even though there be no apparent diminution of his mental or physical energy. Sir Joseph Lister seems as active and able now as when, twenty-three years ago, in the midst of his early experiments on antiseptic dressings, he resigned his chair of Systematic Surgery in Glasgow to become the successor of Syme in the Clinical Surgery chair of Edinburgh University.

The authorities of King's College, recognizing the eminence and great ability of this distinguished surgeon, have so far relaxed the rules of the institution that they have determined to retain his services in the wards of the hospital for another year—his duties as a clinical teacher, however, being transferred to younger hands.

His last lecture consisted of an excellent *résumé* of the present aspect of the essential parts of the antiseptic treatment of wounds. At the conclusion he spoke with some degree of sadness of the termination of his course as a lecturer, and expressed to the students the hope that in the practice of their noble profession their main object would be to promote the good of their fellow men—a principle which Sir Joseph Lister has ever had present to his mind during his long and brilliant career.

THE PROGRESS OF BACTERIOLOGY.

One of the three general addresses delivered at the recent meeting of the British Medical Association was devoted to this subject, and assigned to Dr. Sims Woodhead. The complete address, with editorial comments, appears in the London Lancet, August 6, 1892.

It is little more than a decade since this subject gained any prominence, and the remarkable researches of which it has been the source have flowed in such abundance as to overwhelm the slower progress of other branches. The subject is so fascinating, and the way is so open to new investigations, that its rapid advance is hardly matter of surprise; and although in more than one direction the path has seemed closed, and steps have to be retraced, yet on the whole the amount of actual progress within the memory almost of the youngest follower of medicine has been surprisingly great.

The chief rôle of bacteria in respect to disease is now considered to be played in connection with the formation, through their action, of chemical substances inimical to cell nutrition. Thus many of the morbid processes with which we are familiar, in the facts of pathological anatomy, have an origin in parasitic organisms. Inflammation has been largely explained in this way; and it is by no means improbable that some, at least, of the forms of neoplasms may be initiated through such agencies. It is, however, in the class of infective diseases that the influence of micro-organisms has been most clearly shown, thus bearing out the truth (so long only guessed at) that there are germs of disease, although the meaning to be attached to such a phrase is materially different from that assigned it by the earlier theorists. Dr. Woodhead selected diphtheria as an example of the affections in which the mode of action of the infective microbes has been most fully studied.

He reminded his hearers that the early experiments of Professor Loeffler, who separated the bacilli from their products by filtration, and the subsequent observations of Professors Roux and Yersin yielded results in complete harmony with the interpretation of the clinical phenomena of the disease, in which the profound general disorder of tissues and organs ensues upon the primary local manifestations. These observers established the fact that the diphtheritic organisms are not to be found in the body beyond the site of inoculation, and that the general effects are produced by their products.

Dr. Sidney Martin succeeded in isolating the poisons thus produced. He showed that the essential chemical agencies which exert so powerful an influence on the tissues in diphtheria are albumoses The mode of formation of these substances from the fibrinous exudation that forms on the unhealthy mucous membrane which serves as the point of attack of the diphtheria bacillus has been admirably worked out by Dr. Martin, and was clearly summarized by Dr. Woodhead. In this chain of processes, commencing with the specific bacillus, its appropriate media, its power of producing a ferment or enzyme, and the further effect of this in the conversion of fibrin into albumose, we find the most complete presentation of the mode of action of pathogenic bacteria which can be desired; and the field, previously explored by Dr. Martin as regards anthrax, is open for multifold inquiries on the same lines throughout the whole range of infective disease. It is indeed true that in chemistry lies the solution of many a pathological problem.

Incidentally Dr. Woodhead suggested some improvements in the way of making greater use of opportunities for the application of bacteriological knowledge to immediate practical purposes, being led thereto by the advocacy of Professors Roux and Yersin of culture observation in the diagnosis of diphtheria.

Dr. Woodhead presented a clear statement of the question of protective inoculations. That "anti-toxines" do exist in some of these infective diseases, if not in all, must be admitted from the evidence; but that they act in any other way than as stimulating and reinforcing protoplasmic reaction to bacterial poisons, is improbable. Again, in some diseases the protective influence of previous attacks or of repeated non-fatal inoculations may be ascribed to "acclimatization"—a theory that the cells of the body gain in their powers of resistance under the action of the poisons themselves. He showed, too, how different this action is from that which occurs in the tuberculin treatment, where necrotic changes are set up by the agent acting in conjunction with the bacillary poison itself; and he did not hold out much hope of such a process having a permanent effect. Lastly, preventive treatment by inoculation with attenuated virus was dealt with and due credit given to Professor Greenfield, whose labors on anthrax have been overshadowed by the work of M. Pasteur and his school.

ELECTRICAL EXECUTION.

Another electrocutive experiment has been successfully carried out in New York State. The period of contact was thirty-seven seconds; twelve, ten, eight, and seven seconds respectively, for four applications. There was no burning of the flesh and no great muscular contraction during the contact. There were no disfigurements found after death as a result of the contact of the electrodes.

Book Notices.

THE DISEASES OF THE STOMACH. By C. A. Ewald, Extraordinary Professor of Medicine at the University of Berlin, Director of the Augusta Hospital, etc. Authorized translation from the second German edition, with special additions by the author, by Morris Manges, A. M., M. D., Attending Physician to Out-door Department, Mt. Sinai Hospital, New York, etc. With thirty illustrations. Pages 497. Published by D. Appleton & Co., New York. 1892.

The present work represents Volume II of Professor Ewald's "Klinik der Verdauungskrankheiten," a treatise which has been received with so much favor abroad that two editions were called for within nine months, and translations made into the Russian, Italian, and Spanish languages.

Volume I is not included since it has already been rendered into English by Dr. Saundby. It treats of the physiology of digestion; and a second edition has just been issued, in connection with the English translation of the present volume, by the new Sydenham Society of London.

The two parts are entirely independent of each other. The important references to Vol. I of the "Klinik" have been condensed and included in the translator's foot-notes. The additional matter, and a number of illustrations which have been incorporated into the text, are enclosed in brackets.

The scope of the book will be fairly indicated to the reader by an enumeration of the subjects considered, which are:

Methods of Examination—Determination of the acidity and acids of the contents of the stomach; determination of the digestion of albumin and starch; absorption and motility; the technique of the examination of the stomach. The Stenoses and Strictures of the Cardiac Orifice of the Stomach. The Stenosis and Strictures of the Pylorus—Megastria and gastrectasia; dilatation of the stomach. Cancer of the Stomach. Ulcer of the Stomach—Ulcus pepticum seu rodens. The Inflammations of the Coats of the Stomach—Gastritis glandularis acuta, idiopathica et sympathica; gastritis phlegmonosa purulenta; gastritis toxica. Gastritis Glandularis Chronica—Chronic catarrh of the stomach; atrophy of the stomach. The Neuroses of the Stomach—The physiological relations of the stomach. The Correlation of the Diseases of the Stomach to those of Other Organs—The practical value of the modern chemical tests.

It contains thirty well executed illustrations which aid materially in elucidating the text, and covers a very complete, clear, and modern presentation of the methods of recognition, diagnosis, and treatment of diseases of the stomach—a subject which many practitioners have little knowledge of, and which deserves the greatest consideration of every intelligent physician.

THE COSMOPOLITAN FOR AUGUST.

This number is designed by the publishers to be especially entertaining to readers who are pitching their tents in the mountains and at the sea-side.

A drowsy August afternoon, the light shimmering through the dense leaves of the broad-spreading beech trees; a figure lying upon the grass holding in his hand a magazine—not too heavy—just heavy enough for easy holding—the Cosmopolitan for August; just the sort of reading matter for a midsummer afternoon—full of attractive illustrations; scenes and life in the far off Phillippine Islands, with an experience of an earthquake; photographs on the Atlantic Beach accompanying a charming sketch of Jersey's "Salt-Water Day," by Hamlin Garland; charming Spanish bits by the artist Chase; lovely vistas and enticing groves, illustrating a California Farm Village, in which Col. Fitzsimmons describes the growth and development of a model community of fruit farms Of the fiction, Henry James' "Jersey Villas" makes delightful midsummer reading, and there is an odd story of Southern life, while Curiosities of Musical Literature will furnish a half-hour's entertainment for every lover of music. English high society is always an interesting subject when discussed by one who is of it and knows it thoroughly; Henry Arthur Herbert of Mucross, formerly an officer of the Guards and an M.P., gives in an entertaining way the cause of the revolution which has taken place in the society of London in the past thirty years. Even Murat Halstead's

description of the convention at Minneapolis is breezy and bright, and the beautiful photographs which illustrate an article on Bridges and Bridge-building would attract a very unscientific reader. The one heavy article of the number is that of the famous English writer on Evolution, St. George Mivart. It is a part of the discussion in which he seeks to harmonize the principles of Evolution with the doctrines of Christianity—one of the most important series of papers ever produced in a magazine, and attracting the widest attention among religious and scientific minds, both in England and this country.

SCRIBNER'S MAGAZINE FOR AUGUST.

This is the annual fiction number of Scribner's. It contains seven stories, four of them handsomely illustrated. The complete contents are:

"I Have Followed the Currents Under the Branches." Frontispiece. Drawn by C. Delort; engraved by F. A. Pettit.

"Stories of a Western Town—'I. The Besetment of Kurt Lieders.'" By Octave Thanet; illustrated by A. B. Frost.

"Faded Pictures." By William Vaughn Moody.

"A Riverside Parish." By Walter Besant. [The fifth article in the series on "The Poor in Great Cities."] Illustrated by Hugh Thomson.

"Sun in the Willows." By Harrison S. Morris.

"When the Century Came In." By Mrs. Burton Harrison.

"After the Battle." By Edgar Mayhew Bacon.

"Icebergs." By N. S. Shaler. Illustrated by W. L. Taylor; engraving by Heard, Van Ness, Varley, Merrill, E. H. and George Del'Orme.

"As One Having Authority." By H. C. Bunner; illustrated by W. T. Smedley.

"Jack-in-the Box." By T. R. Sullivan.

"Guérin's Centaur." By Mrs. James T. Fields; illustrated by C. Delort; engraving by Peckwell.

"The Triumph of Mary Laviolette." By Duncan Campbell Scott; illustrated by Chester Loomis.

"Children's Nights." By Kate Douglas Wiggin.

"A Little Parable." By Anne Reeve Aldrich.

"How I Sent My Aunt to Baltimore—A True Story." By Charles Stewart Davison.

"Historic Moments: Driving the Last Spike of the Union Pacific." By Sidney Dillon; with illustrations from a photograph.

"The Point of View."—'A Lack of Faith in Literature'—'The Deucalion of Tahiti'—'The Perfect Person in Fiction'—'A Provision for Age.'

A NEW PRONOUNCING DICTIONARY OF MEDICINE. By John M. Keating, M.D. [Visiting Obstetrician to the Philadelphia Hospital, and Lecturer on Diseases of Women and Children; Gynæcologist to St. Joseph's Hospital; Surgeon to the Maternity Hospital, etc.], and Henry Hamilton [Author of "A New Translation of Virgil's Æneid into English Rhyme;" Co-author of "Saunder's Medical Lexicon," etc.] Price: Cloth, $5.00; leather, $6.00, net. Published by W. B. Saunders, 913 Walnut street, Philadelphia.

This handbook of medical, surgical and scientific terminology, containing explanations of the various terms used in medicine and the allied sciences, with phonetic pronunciation, accentuation, etymology, forms a very handsome royal octavo volume of 818 pages, printed from type specially cast for the work, on paper manufactured for this purpose. It will contain important tables of bacilli, micrococci, leucomaines, ptomaines, etc., etc., the whole forming a most complete, reliable, and valuable dictionary. It contains many new words, and has appropriately left out many obsolete ones. It will be found most convenient for reference by all practitioners seeking such information, and constitutes an invaluable aid to the medical student.

NEW ENGLAND MAGAZINE FOR AUGUST.

The bill of fare for the August New England Magazine is a very varied and attractive one, presenting rather more fiction than usual for the hotel piazza and the hammock under the trees. The quality of its contents may be gathered from the following array of titles and authors:

"Round About Gloucester," Edwin A.

Start; "Hans Guteman's Winnings," McGregor Jenkins; "Just Taxation," J. Whidden Graham; "Heat," Clinton Scollard; "Dusk," Julie M. Lippmann; "Walt Whitman," George D. Black; "Walt Whitman in Boston," Sylvester Baxter; "Walt Whitman's Democracy," Walter Blackburn Harte; "The Chicago Fire," Joseph Kirkland; "Off Monomoy Point," William Earle Baldwin; "Professions and Trades for Workingmen's Boys," Forrest Morgan; "Ye Romance of Casco Bay," III, Herbert M. Sylvester; "When I am Old," Arthur L. Salmon; "The Argentine Republic," Don Juan S. Attwell; "One of a Thousand," I and II, Eben E. Rexford; "Free Summer Pleasures for the People in Boston," Kate Gannett Wells; "The Candidate at Binnacle," Benjamin Asbury Goodridge; "Marco Polo's Explorations, and their Influence upon Columbus," Helen P. Margesson; "A Study of Francis Saltus," Walter Blackburn Harte; "The Editor's Table," Edwin D. Mead.

Book on the Physician Himself, and Things that Concern His Reputation and Success. By D. W. Cathell, M. D. New Tenth Edition (Author's last revision). Thoroughly revised, enlarged, and rewritten. In one handsome royal octavo volume, 348 pages. Bound in extra cloth. Price, post-paid, $2.00, net. Philadelphia: The F. A. Davis Co., publishers, 1231 Filbert street.

This book has had a phenomenal sale, and deserves it. The sentiments it advocates are worthy the consideration of all aspiring to practice medicine successfully. It is written in a most independent but entertaining and liberal vein, and its lessons pointed by quotations which impress them on the reader's mind.

We advise our readers to buy it. It will give them food for thought, and show them how to and how not to achieve reputation and success.

Food for August.

The August number of Food, published by the Clover Publishing Co., 71–73 Park place, New York, presents a noticeable change in its make-up—a change in the direction of improvement—the larger part of the magazine being divided into departments, with attractive headings characteristic of the features discussed. This departure renders Food more entertaining than ever, giving as it does greater variety to the contents. The contents for August include: "Our Cooking Club" (Part IV), by Florence Morse; "Food and War" (Part II), by William O. Stoddard; "Food in Health and Disease," by Chas. Good, M. D., M. Ch.; "Dainty Breakfast Dishes," by Carrie May Ashton; "Possibilities of Sardines," by F. N. Barrett; "What to Do with Clams," by David A. Curtis; "Currants," by Katherine Armstrong; "Sweet Pickles from Fruits and Vegetables," by M. J. Ashton; "The Invalid's Tray," by Mrs P. W. Spicer; "Food for the Sick—Liquid Diet," by Elizabeth Robinson Scovil; "Nutritious and Palatable Dishes"—prepared from a vegetarian standpoint; "August Menus."

The Science and Art of Midwifery. By William Thompson Lusk, A. M., M. D., Professor of Obstetrics and the Diseases of Women and Children in the Bellevue Hospital Medical College; Consulting Physician to the Maternity Hospital and to the Foundling Asylum; Visiting Physician to the Emergency Hospital; Gynæcologist to the Bellevue and the St. Vincent Hospitals, etc., etc. New Edition, revised and enlarged, with numerous illustrations. Pages 761. Published by D. Appleton & Co., New York. 1892.

Dr. Lusk's work is too well known to our readers to need an introduction. This, the fourth, edition has been so revised and rewritten as to make it fully in harmony with the latest, most modern and approved methods of the obstetrical art. It contains four plates and two hundred and thirty-two illustrations. It will be welcomed by the large number of practitioners all over the world who have long used Dr. Lusk's work as their reference, and by the numerous students who have imbibed the author's teaching at the Bellevue Hospital Medical College.

The Medical and Dental Register-Directory and Intelligencer of Pennsylvania, New Jersey and Delaware (1892 Edition); pp. 424; price, by mail, $1.25. George Keil, publisher, 306 Chestnut street, Philadelphia.

This book contains a complete list of the

national and State medical and dental associations, with their officers and date of meetings, medical and dental colleges of the United States, and other very valuable material, medical and dental laws, hospitals, homes, etc., also a list of the medical and dental practitioners, with their school and year of graduation, postoffice addresses, and office hours.

The work has been carefully compiled, and bears the impress of being thoroughly reliable in all its departments. It is well printed on good paper, nicely bound, and its appearance carries with it irrefutable evidence that it is of that class of publications which immediately take popular hold in the special field for which they are designed.

A Treatise on Diseases of the Nose and Throat. By Frank Huntington Bosworth, A. M., M. D., Professor of Diseases of the Throat in the Bellevue Hospital Medical College, New York; Consulting Laryngologist to the Presbyterian Hospital, etc., etc. In two volumes. Vol. II. Diseases of the Throat. With three colored plates and one hundred and twenty-five wood cuts. Pages 832. Published by Wm. Wood & Co., New York. 1892.

The division of labor in medical practice cannot be better illustrated than by regarding the vast extent of information now requisite to properly diagnose and treat the diseases of the throat and nose.

The first volume, devoted to the diseases of the nose, appeared two and a half years ago, and met with a warm welcome. This volume completes the work, and is a tribute to that spirit of special research which has so developed modern sciences and arts, not excepting medicine.

Not only for the specialist but for the general practitioner this work is a mine of information which will help solve many problems daily met.

The diseases of the nose and throat are numerous, and their intelligent and successful treatment means a lucrative practice.

Transactions of the Michigan State Medical Society for the Year 1892. Volume XVI. Pages 461. Detroit: John Bornman & Son, printers. 1892.

Notes and News.

Paper Money as a Carrier of Infection.—

The possibility of infection being conveyed to a large number of persons by means of paper money has often been suggested, and an examination of the notes of the Bank of Spain current in Cuba, which has recently been published by Drs. Acosta and Rossi in the Crónica Médico-Quirúgico de la Habana, shows that this form of currency is indeed liable to contain septic germs. The notes chosen for their experiments were some that had been in use for a good while, and were such as represented values of a few pence only. It was estimated that two notes, weighing altogether about fifteen grains, contained more than 19,000 germs of various kinds. Cultures were made in broth, gelatin, and agar, and these were injected into the peritoneal cavity of rats and guinea-pigs, most of which died within twenty-four hours, the post-mortem examination showing signs of peritonitis and congestion of the liver and kidneys. The blood of the heart and peritoneum was made use of to inoculate solid media, in which colonies developed so rapidly that it was impossible to determine their precise nature, many different forms being intermingled.—*London Lancet.*

Control of Prostitution.—

In a report on this subject, Blaschko says: "The obligatory keeping in licensed houses of prostitutes is to be rejected from a hygienic point of view, and as a failure as regards the prophylaxis of syphilis. The surveillance should be transferred from the ordinary police to the sanitary police. It can only be exercised over professional prostitutes. Examinations should be practiced at least twice a week and at hospitals. To the sanitary examinations should be attached "outpatient" treatment for cases which do not need to enter the wards, and especially for cases which require care and watching after discharge from a hospital. Sanitary surveillance is not by itself sufficiently thorough to combat venereal maladies. It should be completed by suppression of all legal and other edicts against venereals, placing of them on the same footing as regards admis-

sion to hospitals, care, and treatment as other cases; increase in the number of beds assigned to venereal cases; establishment of public consultations as an annex of the hospitals; free treatment; the dissemination of knowledge among the inhabitants of populous centres, relating to the dangers and the mode of propagation of venereal diseases."
—*Rev. Gén. de Méd.*

A New Method of Skin-Grafting.—

This is thus described by its originator, Ereberto Aievoli: An animal with well-developed testes is castrated. The organs are washed in the usual salt solution and then cut in thin sections, which are placed in a salt solution. The granulation surface, after being cleaned, is covered with small pieces of the testicle, these being placed one or two centimetres apart. Antiseptic dressing. Good results are claimed, which Aievoli thinks are due to the marked biological activity of the cells implanted. In experimentation he used sections of the salivary and mammary glands and the testes.
—*New York Medical Record.*

The Mississippi Valley Medical Association.—

The Mississippi Valley Medical Association will hold its eighteenth annual session at Cincinnati, Wednesday, Thursday, and Friday, October 12, 13, and 14, 1892. An address on Surgery will be delivered by Dr. Hunter McGuire, of Richmond, Va., President of the American Medical Association. An address on Medicine will be made by Dr. Hobart Amory Hare, Professor of Therapeutics and Clinical Medicine, Jefferson Medical College, Philadelphia. The social as well as the scientific part of the meeting will be of the highest order. Charles A. L. Reed, M. D., Cincinnati, President; E. S. McKee, M. D., Cincinnati, Secretary.

Editorial Changes.—

Owing to the large amount of work incident to the position of Secretary-General of the Pan-American Medical Congress, Dr. C. A. L. Reed finds it necessary to sever his relations as associate editor with the New England Medical Monthly, the Medical Mirror, and the Journal. The position made vacant by the resignation of Dr. Reed will be filled by James F. W. Ross, of Toronto. Dr. Ross is a writer well known in the literature of abdominal and pelvic surgery, and will bring to the Journal a knowledge and judgment born of large experience.

The Barnes Hospital of St. Louis, and the Barnes Medical College.—

St. Louis has recently been the fortunate recipient of a munificent bequest from Robert A. Barnes, who left provision in his will for the founding of a hospital. The amount bequeathed is said to have exceeded one million dollars. This is the largest bequest for such a purpose ever made west of the Mississippi river, if not in the United States.

The Rumored Illness of Dr. Koch.—

A rumor has reached the English newspapers that Professor Koch is ill and unable to work. In Berlin, however, nothing is known of the Professor's indisposition. He is at work as usual every day at his Institute for Infectious Diseases.

Dr Parker on Medical Law.—

Dr. W. Thornton Parker has accepted the invitation of the faculty of the College of Physicians and Surgeons, Chicago, to deliver the course of lectures on Medical Jurisprudence during the approaching season of 1892–3.

New Bone-Forming Process.—

Prof. Duplay, of the Paris Faculty of Medicine, and Dr. Cazin have discovered a new use for iodoform gauze. They have experimented on 29 rabbits and 30 dogs with a view to discover a bone-forming process. It is well known that in certain tuberculous and syphilitic disorders the interior of the bones is eaten away by the malady, leaving cavities which are with difficulty refilled, especially if the patient be elderly or of weak stamina. Dr. Duplay's experiments have shown him that this refilling process may be considerably hastened by filling the cavity with a spongy or aseptic substance, such as iodoform gauze. This is rapidly incrusted by the new osseous formation which clings to it. The gauze almost disappears when the new growth of bones is complete.

Therapeutic Brevities.

Effects of Medicated Inhalations.—Dr. A. Irsai, of Buda-Pesth (Lancet, No. 3586, May 21, 1892), has made some instructive laboratory observations on the effects of the inhalation of various substances on the lungs and air-passages. Inhalation of air impregnated with the vapor of oleum terebinthinæ produced distinct pallor of the lung-tissue, due, doubtless, to spasmodic contraction of the pulmonary capillaries. Oleum juniperi and oleum pini sylvestris produced similar results, but less in degree. Oleum eucalypti, oleum anisi, oleum menthæ, and menthol, similarly inhaled, produced scarcely any change in the color of the lung-tissue. Creasote, thymol, and in a still greater degree guaicol, produced redness, with great hyperæmia of the lungs. From these observations Dr. Irsai concludes that in acute catarrhal affections, with swelling, hyperæmia, and profuse secretion, those substances which produce anæmia of the lungs should be chosen; while in chronic torpid conditions, or in phthisis, where the supply of blood and the nutrition of portions of the lungs are defective, substances which induce hyperæmia should be used. With any tendency to hæmorrhage, creasote or guaicol may prove dangerous.

Hydrastinine in Epilepsy.—V. G. Kiseleff (Vratch, No. 20, 1892), experimenting on dogs and guinea-pigs, has found that intravenous injections of hydrastinine (see Epitome, April 23, 1892, p. 66; and May 28th, p. 87), even in small doses (0.04 gramme per 1 kilogramme in dogs), distinctly lowered the excitability of the brain cortex, and mitigated or prevented epileptic fits induced by absinthe. These observations induced him to try hydrastinine in six cases of epilepsy. It was given internally, in an aqueous solution, from $\frac{1}{3}$ to $\frac{1}{2}$ grain *pro dosi* up to 1 or 2 grains a day. In four patients, in two or three weeks the fits decreased both in frequency and in intensity, while in the remaining two the treatment was less efficacious. No unpleasant accessory effects were noticed. F. Kh. Gadziacki also employed hydrastinine in a case of epilepsy, but without result. The hydrastinine treatment of epilepsy, as well as of hydrophobia and strychnine poisoning, was first suggested by P. I. Arkhangelsky (St. Petersburg Inaugural Dissertation, 1891, No. 59), whose experiments on animals showed that the alkaloid ($C_{11}H_{13}NO_3$) possessed powerful antispasmodic properties.

Salicylate of Bismuth in Infantile Diarrhœas.—Mikhnevitch (Med. Obozreniĕ, No. 6, 1892), having tried the salicylate of bismuth in 50 cases of diarrhœa in infants under two years of age, reports that, of the number, only two died (a boy of eight months with pelvic suppuration consecutive to intractable colitis; and an infant of five months, born prematurely and exceedingly sick since its birth). The following formula is recommended:

℞ Bismuthi salicylici, gr. xxiv.
Gummi arabici, ʒ j.
Sacch. albi, ʒ jss.
Terendo adde aq. dest., ʒ ij.
Fiat lac, tum adde aq. dest., ʒ iv.

M. D. S. The bottle to be kept in cold water or ice, and to be shaken well before use. One or two teaspoonfuls to be given from three to six times daily.

Each teaspoonful of the mixture contains about one-half grain of salicylate, which constitutes a normal dose (three or four times daily) for an infant of from six to eight months of age. In cases of offensive diarrhœa the administration should be preceded by a dose of castor oil.

Injections of Testicle Juice in Tuberculosis.—Espagne and Pourquier (Nouv. Montpellier Méd., June 4, 1892) have tried hypodermatic injection of testicle juice in a case of pulmonary tuberculosis. The patient was a girl, aged 19, without known hereditary antecedents, but of lymphatic temperament. There was harsh breathing nearly all over the chest, and dry crackling at both apices, especially on the left side and at the back. The girl suffered from amenorrhœa and profuse night sweats, and was wasting steadily. The testicle juice was prepared as follows: 50 grammes of testicular substance (from a bull calf) were macerated for twenty-four hours in 50 grammes of sterilized glycerin. This preparation, after filtration first through paper and then through a Chamberland filter, gave a clear liquid almost as transparent as distilled water. The injection of a Pravaz syringeful of the liquid caused considerable pain, but was followed by a fall of temperature and reduction in the pulse rate. The authors, however, are doubtful whether a repetition of the injection will be permitted.

Balsam Peru in Surgical Practice and Diphtheria.—The balsam Peru is used in my treatment of wounds. A compound fracture is treated by pouring the balsam freely into the wounds. Compound fractures of the hand and fingers, so common among railroad

injuries, have given the best results when they have been treated freely with the balsam, covered with gauze and wrapped in cotton. I advise its use in all open wounds.

In diphtheria I have found it the best agent to apply to the exudate for the purpose of disinfecting and sterilizing it. Children tolerate it, owing to its pleasant taste. It is powerful as a destroyer of diphtheritic membrane which appears on tonsils and fauces, and can be applied by means of a swab of soft cotton soaked in the solution.—Hal. C. Wyman, M.D., in *American Therapist.*

A Remedy for Chronic Rheumatic Arthritis. Hugh Lane, in his recent work on Rheumatic Diseases, again emphasizes the value of the old recipe commonly known as the "Chelsea Pensioner." Lord Anson is said to have given £300 for the liberty to make it public.

℞ Honey, ℥ xvj.
Sulphur, ℥ j.
Cream of tartar, ℥ j.
Rhubarb, ʒ iv.
Gum guaiacum, ʒ j.
Nutmeg, No. j.

M. Sig.: Two tablespoonfuls in a small tumbler of white wine and hot water on going to bed, and the same quantity before rising in the morning; the patient to remain in bed until any perspiration that may be occasioned has subsided.

—*International Med. Magazine*, July, 1892.

Nitroglycerin Subcutaneously in Poisoning by Illuminating Gas.—Dr. Hoffman (Allgemeine Med. Centr. Zeitung, 1891) reports a case of poisoning by illuminating gas where the patient breathed the air of a small room into which gas had escaped from an open burner from 11 P. M. till 9 A. M. Four grammes of ether were injected under the skin without result. One milligramme ($\frac{1}{60}$ grain) of nitroglycerin was injected into the præcordial region. One-half a minute later the pulse became stronger and the respiration deeper. From then on, the pulse was regular and strong. One hour later the patient could swallow several spoonfuls of coffee. That afternoon there was headache, dyspnœa, and malaise, but by the next day entire recovery had taken place.

Calcium Sulphide in Tonsillitis.—E. P. Norbury (Therapeutic Gazette, May, 1892) has been much pleased with the effects of small doses of calcium sulphide in acute parenchymatous inflammation of the tonsils. These cases, especially if the subject be strumous, very generally tend to rapid suppuration. He has found that small doses ($\frac{1}{5}$ to $\frac{1}{2}$ grain) of the sulphide, frequently repeated, are most valuable, both in preventing this suppuration, and in hastening convalescence when the mischief is already advanced. Febrile symptoms and pain are both greatly modified under its influence. In abscess of the mouth and throat Norbury prefers to apply a solution of hydrogen peroxide to which has been added a little oil of cassia, which he finds a thorough and most efficient antiseptic.

Cocaine as an Anaphrodisiac.—Dr. H. Wells (La Semaine Médicale, No. 29, 1892) has employed cocaine as a depressant of sexual excitability in man, whatever be its origin. It may be given either internally or by spraying it into the throat. Five centigrammes ($\frac{3}{4}$ of a grain) of the drug at a time are sufficient. It may also be employed as a lotion applied to the glans or prepuce, in a 4-per-cent. solution, or injected into the urethra. The writer has observed that after spraying the throat or nasal cavity a considerable retraction of the penis takes place, with a manifest diminution of the sensibility of the glans and relaxation of the testicles. This observation suggested it as an anaphrodisiac.

Treatment of Chorea.—Jumon maintains that the treatment of chorea should be governed by certain well-defined indications. In ordinary chorea antipyrin and arsenic yield the best results. In chorea of rheumatic origin or associated with rheumatic manifestations antipyrin is still indicated; with it sodium salicylate may be conjoined; sulphur baths may prove useful. If an hysterical element exist, the bromides may be employed. In chorea of cardiac origin depressing remedies are to be avoided; potassium or calcium iodide is indicated. In most cases of chorea gymnastic exercises and reconstructives may be advantageously employed.—*Journal de Médeeine de Paris*, 1892, No. 28, p. 335.

A Mixture to Replace the Opiates.—Dr. Portier (La Semaine Médicale, No. 19, 1892) recommends the following as a substitute for the preparations of opium:

℞ Hydrochlorate of cocaine, 0.5 gramme (gr. viij).
Phenacetin, 1.5 grammes (gr. xxij).
Exalgin, 0.5 gramme (gr. vij).
Salicylic acid, 1 gramme (gr. xv).

Divide into ten powders. Take one powder every two or three hours until the pain ceases.

Treatment of Dysentery.—Drs. Lardier and Pernet recommend salol and iodoform in the treatment of dysentery—the former in doses of four grains, suspended in mucilage; the latter in quantity of four to six grains daily, combined with opium, in capsules. For the relief of tenesmus, warm boracic acid enemata, and in obstinate cases suppositories of cocaine and opium, were found beneficial.—*The Canada Lancet.*

Agathin, a New Anti-neuralgic.—Rosenbaum (Deutsche Medizin. Zeitung, No. 50) has successfully employed agathin in the treatment of neuralgia and rheumatism. Agathin is a body chemically related to salicyl and methylphenylhydrazon, and appears in tasteless and odorless leaves, insoluble in water, soluble in alcohol and ether.

Oil of Wintergreen as a Substitute for Salicylates.—Patients not able to bear salicylic acid or its sodium salt should be given oil of wintergreen in capsules, 10 to 15 drops every two hours. The oil contains a great deal of salicylic acid. Morphia may be added for the relief of the pain.—Dr. Townes in *New Orleans Medical and Surgical Journal.*

Creasote for Whooping-cough.—Creasote, in doses of from half a minim upwards, three or four times a day, is recommended in the treatment of whooping-cough. The cough diminishes, vomiting is infrequent, and the duration of the attack is abbreviated. —*Lyon Médical*, No. 29.

Coca a Preventive of Sea-sickness.—Meccrisse strongly recommends an infusion of coca leaves in the strength of 6 grammes to 100 grammes of water as a preventive of sea-sickness (probably the wine would do as well).—*L'Union Med. de Canada.*

Menthol, in treatment of hæmorrhoids, is much praised; it relieves the pain and the spasmodic contraction of the sphincter ani, permitting the easy reduction of the tumors. —*Times and Register*, July 16, 1892.

Phenol Sulphovicinate is acquiring a somewhat extended use in Paris as a remedy for diphtheria. Cases of the disease have been cured in four days.—*Le Progrés Medicale.*

Medical Progress.

On the Climatic Treatment of Chronic Diarrhœa.—Granted the necessity for absence from home, and for relief from causes which negative all home treatment, what climate is preferable for these cases?

There are three conditions which are desirable:

1st. Surroundings which shall best meet the indications for relief from mental care and give as great a degree of pleasurable diversion as is possible, and thus act favorably on the nervous system.

2d. A climate which will give the greatest activity to the digestive processes, including the appetite, and to nutrition.

3d. Meteorological conditions which will lessen the danger of "taking cold;" that is, of inducing congestive attacks of the gastro-intestinal mucous membrane through sudden changes of temperature.

In considering the first question, the locality in which the patient resides, his individual tastes and aptitudes, as well as the gravity of his case, must be taken into account. In every individual there are certain tastes and idiosyncrasies which should be made of help in choosing a residence. Artists, sportsmen, lovers of scenery or haters of scenery, literary men, business men without literary tastes, tired lawyers, physicians, and clergymen, all have peculiarities and tastes which demand thought in the choice of the medium in which they are to live and upon the successful influence of which so much depends.

The *typical climate* for chronic diarrhœa should have a low temperature, as equable as possible, combined with great atmospheric dryness, with a dry, porous soil, a clear sky, and with little rain-fall or snow-fall. To these conditions must be added the pleasures of fine scenery and agreeable companionship, with opportunities for amusement, without which but little progress can be made in the treatment of this ofttimes rebellious disease.

As one man's experience is necessarily limited, I would not venture to suggest an invariable rule of selection. Each case will require advice based on its gravity, the degree of anæmia and debility, peculiarities of temperament, and other conditions. In *summer*, for severe cases the Catskill and Adirondack and White Mountains, or other regions of 1,500 to 2,500 feet elevation, are well fitted. Many other localities in the Appalachian Range will be found to have all the requirements. In Virginia, North Carolina, and Georgia there are many suit-

able localities, but in midsummer the more northern resorts are to be preferred, because the temperature is lower, and a low temperature is to be preferred.

I have no exact data which will enable me to say how the Rocky Mountain region compares with our own mountains, but I believe that in Colorado, New Mexico, and other States and Territories extreme elevation offers no objection whatever, and that all necessary qualifications are found there.

The milder forms of the disease, in which there is a recurrent but not constant diarrhœa, not of long standing, may be sent in summer to the seashore of Virginia, Delaware, New Jersey, or Long Island, where bathing in water of not too low temperature may be allowed. The more chronic forms, however, with liquid, membraniform, or mucous discharges, are made worse by the sea air, and should not be sent there in summer, and still less in the winter season.

For a *winter* residence, the mountain regions of western North Carolina and northern Georgia are peculiarly fitted, more so than the colder Adirondacks. Aiken and similarly situated elevated regions may serve for those unable to stand the mountains. The merits of southern California and of Colorado and New Mexico, as winter homes for such cases, also deserve consideration.

The drawbacks of hotel life are not so great as may be supposed. Competition and the increasing demand for comforts and luxuries in health-resorts provide the health-seeker with almost any convenience he may need, and it will not be difficult for him to find in a suitable climate all the assistance which comes from a comfortable home and kindly care.

It is not my wish to extol the merits of any section for the cure of this disease, but rather to draw attention to the necessity of cure by residence in an appropriate climate, and to the real climatic conditions to be sought for. And although my remarks may have a somewhat dogmatic tone, they are founded upon instructive experiences, which have taught at least what climates are to be avoided, and what mistakes may be made by an undirected patient, when pleasure is the chief object sought, and when no positive advice is given him as to what he needs.

Gonorrhœal Rheumatism: Its Effects and Treatment.—It is certain that gonorrhœal or urethral rheumatism is in the first instance invariably preceded by a specific discharge. Subsequent attacks may or may not be preceded by a discharge; but this freedom from preliminary urethral discharge is never true of the first attack. A second attack of articular inflammation may be caused by the use of the bougie or by an act of coition, or by any other form of irritation of the urethral canal.

Exposure to wet and cold weather, the gonorrhœal discharge being present or being about to appear, tends to induce this form of articular inflammation. Considerable effusion into the affected joints takes place, accompanied with great pain; but, although tension may be very great, suppuration never occurs. Many joints usually become inflamed simultaneously, and all may recover perfectly and without leaving behind any ill results. Every fresh attack of inflammation takes more effect than the preceding one, and seems to be more virulent in its character; and it is probable that although on two occasions, perhaps, the joints may resume their normal appearance and their functions, a third attack may leave the patient lamed. It is common that all the joints shall recover well except one, but that one remains stiff and immovable.

When pain is first felt and swelling appears, the affected joints should be wrapped in lint covered with mercurial ointment, and they should be bandaged as firmly as can be easily borne, and the patient should be brought rapidly under the influence of mercury, preferably by inunction. With such treatment pain and swelling quickly disappear, and the joints resume their normal condition. At this stage passive motion should be instituted, to ascertain that the motion of any affected joint is free; for lymph will have been deposited on the synovial membranes, through which adhesions form. These bands soon become firm, and resist any attempt that a patient himself can make to move the joint.

The mercurial treatment to which I have referred, if resorted to in the onset of the inflammatory stage, never fails; swelling subsides as the mercury takes effect.

When, after inflammation has ceased, and passive motion has not been employed, adhesions remain and become firm, force is needed to restore mobility. If this force is employed in extending the limb, dislocation may be produced, or at least some displacement of the articular surfaces may occur. Force should therefore always be used in the direction of flexion. When force is thus employed, no injury can accrue to any structure. And if this operation have been long delayed, so that contraction of the flexor muscles cannot otherwise be overcome, their

tendons should be divided. But before force is applied to rupture adhesions, the punctured wounds should be allowed to heal; for otherwise they may readily be extended into lacerated wounds from three to four inches in length.

In this manner mobility is very quickly regained. The operation is entirely successful, and it ranks among the most satisfactory in the whole range of surgery.—B. E. Brodhurst, in *Medical Press and Circular*, March 12, 1892.

A New Method of Removing the Prostate Gland.—On April 6th a case of enlarged prostate gland came to my hospital for operation. The patient was John W., of Bluffton, Ind., aged 70 years; bodily vigor fair, but not such as would warrant an operation of great gravity. The walls of the bladder retained their usual contractile power, but the urethral canal was so compressed from the hypertrophied prostate that only the smallest soft-rubber catheter could be inserted to empty the bladder of urine. I planned an operation to suit the physical needs of the patient, feeling assured that the supra-pubic operation of Dr. E. L. Keys, and the lateral incision as in the lithotomy operation described by him and others, were surgical proceedings that my patient could not well endure. An acquaintance with the anatomy of the rectal and perineal spaces soon suggested that a much simpler operation than either of the above was possible; and forthwith I proceeded to satisfy myself by a process of reason that I was not on the side of fancy, but real possibilities. The space immediately in front of the rectum and behind the bulb of the urethra was chosen as the route through which to reach the base of the bladder and prostate gland. The transverse diameter of the outlet of the pelvis at this point is too short to work in, and consequently it behooved me to increase the operating space without doing injury to important structures. I accomplished this by making a semicircular incision from a point midway between the tuber ischii around the anus, and entirely within the connective tissue between the bulb of the urethra and the rectum, or what should be styled the male perineum. The advantage of this is that it gives the widest possible diameter of the outlet, with no hæmorrhage to speak of, and an easy access to the field of operation. No spurting vessels need be divided, inasmuch as they lay to the outside and in front of the incision. After the integument and tough fascia are divided, the handle of the scalpel may be used to separate the loose tissue between the rectum and urethra, until the fascia covering the levator ani is reached. Division of these structures should be next in order, when the enlarged prostate will make its appearance. The finger is the most convenient instrument in the operation, and should be freely used in opening up the way and separating the gland. At this juncture the prostate may be seized with a pair of vulsellum forceps and pulled through the incision. If the space be not large enough, the lobes may be removed separately. With a knowledge of the anatomy of the part, but little difficulty is encountered in their removal. The step to be guarded is the introduction of a steel sound in the bladder after or during the operation. Puncture of the urethra is an accident very likely to happen, on account of the fact that it is loosened up and is very thin. With ordinary care this need not occur. A curved steel sound in the bladder is an aid during the excision. It keeps the base of the bladder from ascending while the gland is being separated.

No operation can be more simple than this, and none can be more important. It promises an easy removal of the prostate and but slight risk to the patient.

My case was operated on in the way described, and the operation was successful. I found no difficulties to overcome, and can specially recommend this proceeding.—J. S. Pyle, M.D., in *Medical Record.*

Arsenite of Copper in Summer Complaint and Diphtheria.—Dr. M. M. Lalta, in the Indiana Medical Journal, writes: "Success in the treatment of diarrhœa and dysentery with arsenite of copper suggested the idea of its use in diphtheria, on the ground that it was the alimentary system that was involved in both cases. The 1st of October, 1891, an epidemic of moderate severity made its appearance in this city, and lasted for several months. My cases, varying in age from one to ten years, were put upon the arsenite treatment, which was supplemented by small doses of calomel when it was needed on account of constipation. Inunction with sulphate of quinine suspended in glycerin was practiced in all cases, usually repeated every four hours. How much quinine was absorbed I do not know, but the plan keeps the skin in good condition. Where there was much cough or hoarseness, equal parts of glycerin and any good wine were given with the arsenite. Or, if that was not agreeable, 1 per cent. of ben-

role acid, combined with powdered sugar, was dropped on the tongue, and repeated as often as thought necessary. No local applications were made. The surroundings were looked after; and when, as happened in some of the cases, little food could be taken, an effort was made to induce them to take water freely, either plain or in the form of lemonade. None of these cases were malignant, none died, and none suffered from unpleasant sequelæ. Such a short experience in the treatment of such a disease ought not to count for much, but I feel certain that the plan will prove (to say the least) as successful as any, while its application will be much more agreeable to all concerned."

Dr. Robert Carothers, in the American Therapist, states that he has used the arsenite of copper in summer complaint with much success. He says: "It is the chronic stage of which I wish particularly to speak, when the disease has traveled down into the lower bowel, the stools small, containing mucus tinged with blood, producing pain and tenesmus—the prostration, vomiting, and fever having subsided. It is in this stage that such excellent results are obtained from the use of arsenite of copper, given by the mouth, and thrown into the bowel as an enema. I have seen cases of chronic or subacute dysentery, which have been running weeks, relieved in a few days by the use of arsenite of copper, prescribed as above. In the chronic as well as the acute stage the importance of diet must not be lost sight of, but it will not be necessary to enforce so rigid a course. It has been my custom, if the case be an infant at the breast, to lengthen the intervals between nursing from three to five hours, and in young children to confine them for a few days to an exclusive milk diet, with intervals between the feeding of from four to six hours. I have frequently used the arsenite of copper as an intestinal antiseptic in acute summer complaint with good results, but my experience tells me that it is especially indicated in chronic or subacute trouble located in the lower bowel."

A Seventh Case of Traumatic Tetanus Treated by the Tizzoni-Cattani Antitoxin.—Another case of pronounced tetanus, to which the treatment by the tetanus antitoxin was successfully applied, is reported by G. Casali (Rif. Med., June 1, 1892). The details are as follows: The patient, a woman, aged 22, developed symptoms of the disease eight days after receiving an injury to her foot. The wound had quickly become inflamed, and the inguinal glands enlarged and painful; it had been in consequence washed with carbolic lotion and dressed antiseptically. The progress of the symptoms was fairly rapid, and when received into hospital, on the fourteenth day after the injury, the jaws were tightly closed, speech was indistinct, slow, and painful, there was marked "risus sardonicus," the muscles of the neck and back were stiff, and there was also some spasm of the injured limb. Tizzoni, on being summoned, confirmed the diagnosis, and cauterized the wound with silver nitrate, recommending the daily application thereto of the caustic in a 1-per-cent. solution. He also arranged that the patient should receive two injections daily of 25 centigrammes of antitoxin (prepared from the serum of an immunized dog), and ordered her to be kept well covered, so as to favor sweating. After the first injection sweating was very profuse—as it was, indeed, after each of the first five injections—and by the evening the stiffness of the neck and tongue was markedly diminished. Five injections were given in like manner with similar results, the spasms gradually yielding, and the condition becoming steadily better. At this time there appeared a rise of temperature, with a temporary recurrence of the facial pain, but the tetanus proper had practically disappeared. Quinine and stimulants were then administered, and a sixth and last injection of only 15 centigrammes of antitoxin was made. This produced no sweating; and the patient, though cured of the tetanus, showed great restlessness, a slight vesicular rash also appearing on the chest and back (? sudamina). These untoward symptoms, due, it was thought, to septic absorption from the wound, cleared up under ordinary treatment, and the patient was shortly discharged with the injured limb quite healed, and no signs remaining of her illness save great weakness of her limbs. Bacteriological examination of the wound had revealed the presence in it of the tetanus bacillus, of streptococcus septicus, and of a spore-bearing earth bacillus. It was to these latter organisms that the slight septic symptoms were attributed.—*British Medical Journal.*

Toxicity of Exalgin.—In view of the fact that exalgin has recently been so highly recommended for neuralgia and allied affections, I think that the following case should be recorded as illustrating the dangerous symptoms that are sometimes met with. One remarkable fact with regard to this case is

the rapidity with which the symptoms occurred, only a few seconds elapsing between the taking of the medicine and their onset.

A patient (male), aged 26, suffered from neuralgia over the left temporal region for a week. He was inclined to be anæmic. He was ordered a dose containing four grains of exalgin, to be repeated in two hours if unrelieved; and if neither dose gave ease he was directed to take two doses (containing eight grains in all) the following morning after breakfast. The same evening the patient took one dose and obtained relief from the pain, but at the same time complained to his wife of feeling giddy, as if drunk. Next morning at 4:30, feeling a slight return of the pain, he took the rest of the medicine, which contained twelve grains of exalgin. He immediately became dazed, clutched at the bedstead but fell prostrate on the floor, where he remained quite unconscious for half an hour, and during this time frothed at the mouth. On my arrival at this juncture, I found him on the floor making a feeble effort to vomit. The pulse was feeble and slow; eyes closed; pupils natural. He was with difficulty got to answer questions, when he complained of pain in the region of the stomach and noises in the head. One-tenth of a grain of apomorphia given hypodermatically caused him to evacuate the stomach. Subsequently one-five-hundredth of a grain of strophanthin with ten minims of ether was administered in the same way, and the man slowly rallied. The pain in the stomach disappeared first, but the noises in the head remained for some time. Later the patient could not remember events which occurred half an hour subsequently to his regaining consciousness, and during this time he was constantly yawning. He had never had a fit in his life.

Twelve grains of exalgin must be regarded as an excessive dose; but if the toxic dose is three grains for every two pounds of body weight, as stated by some writers, these alarming symptoms ought not to have occurred.—Reginald Broadbent, M.B., C.M., in *London Lancet.*

Cracked Ice for Invalids.—One more thing there is that nurses apparently do not know, says a writer, and that is the value of cracked ice in cases where a prolonged drink of any fluid is next to an impossibility. Finely cracked ice, administered in a teaspoonful of champagne or brandy, has been the rallying point for many a sinking patient. Or the ice alone, finely crushed so that it simply melts away in the mouth, trickling down the throat rather than being swallowed as a draught, is a most useful stimulant. The writer in the Philadelphia Ledger will never forget the look of amazement in Alice Foster's face when she was shown the ice-shaving machine at the Pennsylvania Hospital soon after her arrival there, and when an informal visit to that good old hospital gave an opportunity for conference over many points in nursing.

That ice should ever be needed in such quantities and portions as to require a machine for shaving it, was a novelty to her. In common with her countrymen generally she had the true English horror of ice-water, but the use of ice itself is quite a different matter from deluging the stomach with a cold fluid. The melted ice is not of the ice-water temperature when it is swallowed. People who take cracked ice get the stimulus of ice upon the nerves of the mouth and tongue, and not the flooding by water of the feeble throat and stomach. Did not one ingenious nurse, at the time a matron in the University Hospital, some years ago, actually feed a patient, who revolted at the mere thought of food and was starving in his exhaustion, by deftly sprinkling pounded ice over the bits of broiled chicken that she had prepared to tempt his taste?

It was the novelty and the sparkling ice that carried the day. The man tasted, enjoyed, and ate it all. Each country adds its contribution — according to climate and physical peculiarities—to the science of nursing. It has been said that no one in England can imagine the depths of weakness into which American patients may suddenly go and may be pulled up and out of, because the English climate is not so exhausting in its demands. The uses of cracked ice in cholera cases are familiar to some. It is possible that with hot water bags at the feet, hot mush poultices on the stomach, and a constant diet of cracked ice, no further treatment may be needed to complete a cure. Nursing skill counts for much, and every woman should have as much knowledge of it as will be sufficient to keep patients from sliding down hill until the proper officials arrive.—*Dietetic Gazette.*

Jambul in Glycosuria.—A., æt. 52, a Mahomedan lady, at Rangoon, came under my treatment with the following symptoms: Debility, polydipsia, addephagia, pruritus vulvæ, a large carbuncle on the extensor surface of the left forearm, and polyuria. I found she was passing in twenty-four hours about 10

pints of urine of a specific gravity of 1.045, containing sugar but no albumin. On the 29th of March I incised the carbuncle and gave vent to a large quantity of pus mixed with ash-colored sloughs.

Reading so much in the Indian Medical Record recently about jambul, I thought of trying it in the above case—although I had known of this very jambul being used by herbalists in Goa, where it abounds, for centuries as a specific in diabetes.

I first prescribed ½ grain codeina t. d. During the codeina treatment I kept the patient on a restricted diabetic diet. When I stopped codeina and gave jambul in powder 15 grains t. d., I prescribed her usual food. After about a week she only urinated thrice during the night, instead of five times as she used to do before the administration of the jambul. The next week I changed the powder to the liquid extract, ʒ j t.d., and in a week more I found that she was urinating but once during the night. The carbuncle gradually granulated. Though not placed on a restricted diet I was surprised to note such favorable symptoms.

Now she is comparatively well, although she is passing about three pints of urine, of sp. gr. 1.029, containing some sugar.

It is nearly three months now that she is under the jambul treatment, and I wish to continue it for some months more, with the hope that the small quantity of sugar which still remains will disappear altogether.

Remarks.—No special dieting is required with jambul treatment, showing that it has the therapeutic virtue of preventing in part the transformation of sugar from starchy food, and in part probably of destroying the sugar in the blood and muscles, thus allowing time to that spot in the floor of the fourth ventricle to recover its lost power of governing the glycogenic functions of the liver and the pancreatic secretion. — C. F. Britto, L.R.C.P. and S., in *Indian Medical Record*, July, 1892.

Sparteine Sulphate as a Remedy for Tremors.—Dr. C. S. Potts reports three cases in which great benefit was derived from the use of this remedy.

Case 1.—Male; weaver. Tremors for several years in both hands; not increased by muscular exertion, but worse since a "stroke of paralysis" two years ago. Feet swollen at times; anorexia and nausea; orthopnœa; aortic diastolic murmur. Spart. sulph., ¼ grain t. i. d.; in five days improved heart and lessened tremors. In addition a tonic of arsenic, strychnine, and diluted muriatic acid was given. Tremor disappeared completely.

Case 2.—Male, carpenter, aged 32, with violent tremors of both hands, which he says have persisted since he was eight years of age. The tremors become worse after working hard, or whenever he has headache, from which he suffers a great deal, the pain involving the entire head. He is very easily excited or worried; tongue tremulous; no heart lesion. Sulphate of sparteine, ¼ grain t. i. d., was prescribed, with the result that three days later he reported that both the headache and tremor were much improved. The sparteine was increased to ½ grain t.i.d., and in ten days he returned with a history of continued improvement. The sparteine was then stopped, and a tonic of arsenic and strychnine substituted. At his next visit, five days later, he reported himself much worse, the headache having returned and the tremor being aggravated. The original treatment was then returned to, but, as he discontinued his visits, with what result is not known.

Case 3.—Male, æt. 53; stone mason. In addition to ptosis of the left eye and other symptoms of cerebral syphilis, from which he was suffering, had a severe tremor of both hands; increased after muscular exertion. Under specific treatment, of two months' duration, all of his symptoms improved except the tremor. Sparteine was then added to the treatment, and immediate improvement followed. This has continued for one month, and he is at present taking ½ grain t. i. d., with the result that "his hands are better than they have ever been."

Asepsis and Antisepsis as Applied at the Lying-In Chamber.—The simplest rules must be laid down, and these may be grouped as follows: The patient must be made clean with soap and water, and she must have daily baths for some time prior to labor; with the first manifestation of pain, the lower bowel must be emptied by enemata.

The ideal operation would be to restore a smooth, regular peritoneum and the normal relations of the superimposed structures, to enlarge the cavity, and to strengthen the visceral supports. This, as a rule, is impracticable, and the intra-peritoneal operation is fraught with so much danger as to condemn it.

The operation of cutting down to the fascia on one side the median line, reflecting it to an equal distance on the opposite side, dissecting up the muscles from the middle

line outward in both directions, overlapping and securing them by suture, is full of difficulties, and, while offering many advantages over the direct median section, is not likely to come into general use.

The operation of election must be simple, safe, easy of execution, and lasting in its results. A preliminary treatment is necessary to enlarge the cavity, restore the viscera, and strengthen the muscles. This will consist in keeping the patient recumbent, regulating the bowels, massage, the Trendelenberg posture, and the use of remedies to combat flatulence. The utmost care is necessary to secure asepsis, for the efficacy of the operation depends upon the avoidance of suppuration. The operation will consist in an elliptical denudation, of an inch or more in width, around the margin of the hernial pouch, and to the depth of the fascia; infolding of the hernial pouch towards the cavity; and serried layers of buried catgut sutures so as to coapt the denuded surfaces perfectly. The dressings consist of antiseptic gauze, held in place by strips of adhesive plaster, anchored well down on the sides and tied with tapes over the median line. Over all, the cotton pad and flannel bandage.—William Warren Potter in *American Gynæcological Journal.*

Operative Treatment of Calculus Impacted in the Common Bile Duct.—Vander Veer (Trans. Assoc. Obstet. and Gynæc.) reports three cases of cholecystotomy with special reference to the treatment of calculus impacted in the common duct. It is held that in incision and stricture of the gall duct we have, in such cases, a method which promises great success, where hitherto patients have been treated by the formation of a biliary fistula, which relieved only for a short time. The only case in which the author has carried out this treatment was a fatal one, but death is attributed not to peritonitis, but to exhaustion consequent on cholæmia. After removal of the calculus and careful suturing of the incision in the duct, a glass tube is passed into the abdominal cavity to avoid any bad results from extravasation of bile in case of the stitches giving way. The tube is surrounded by strips of iodoform gauze, the ends of which are left in the partially closed external wound. The author holds that sutures can be applied to the gall-bladder and ducts with safety. He thinks the notion that healthy biliary secretion when effused into the abdominal cavity causes peritonitis is fallacious. The peritonitis and fatal results of wounds and ruptures of the gall-bladder, in his opinion, are not caused by the extravasation of pure bile, but in consequence of accompanying injuries, as rupture of the liver or intestinal canal, and hæmorrhage, or from an empyema of the gall-bladder and the presence of attendant micro-organisms. It is acknowledged, however, that in this method, which is proposed for the treatment of cases in which the calculus cannot be dislodged either into the gall-bladder or into the intestinal canal, the application of sutures to the wound in the duct may often be attended with much difficulty, and may sometimes be found impracticable.

Anti-rabic Treatment by Means of a Non-Virulent Injection.—Poppi (Gazz. degli Ospitali, June 16, 1892) gives the results of some further experiments with regard to a new application of serum to the treatment of rabies. They are as follows: (*a*) The serum of normal rabbits has no destroying effect on the virus of rabies *in vitro*, although Evangelista (Epitome, March 5, 1892, par. 220) found that this property was possessed by the serum of dogs and pigeons. (*b*) The serum from rabid animals sometimes destroyed the virulence of fresh rabid nervous tissue; sometimes it only diminished it, and at other times had no effect upon it. (*c*) The serum from animals previously submitted to anti-rabic treatment had a much more uniform destroying action on the virulence; this was more marked in proportion to the amount of Pasteur's vaccine which had been first employed. (*d*) The serum of animals dead of rabies has no power to prevent the development of rabies in inoculated dogs, whether given subcutaneously or by intravenous injection. (*e*) An emulsion of fresh virulent nerve tissue made with the serum of an immunized animal is non-virulent, and has, besides, a distinctly favorable action when injected into inoculated animals. In fact, this method succeeded in the case of two rabbits and a dog, even when control animals, which received only serum from an immunized animal, succumbed to inoculation with the same virus.

The Action of the Cantharidinates.—Liebreich (Therap. Monatsh., June, 1892) replies to some of the criticisms upon the use of these salts. The chief points to be decided are: (1) Whether these agents have any action on the diseased, particularly

tuberculous tissue, and if so (2) whether this effect is obtained before any disturbance is produced in other organs, such as the kidneys. The author says that the drug gives rise to an increased exudation from the capillaries, and hence its beneficial action, but that there is no hyperæmia. In his cases of lupus a steady decrease in the disease has been noted, but much time may be needed. It is impossible for changes lasting for years to be cured by a few injections. The author sets off this lengthened treatment against the relapses seen after scraping, etc. If the kidneys be healthy, these salts may be used in doses of ¼ to 2 decimilligrammes without injury. If the kidneys are diseased, the treatment should not be adopted. Advanced tuberculosis should only be treated with the greatest caution, for the author says that the kidneys are often affected with lardaceous disease. Improvement has been recorded in other than tuberculous processes, namely, in chronic laryngitis, etc. Any local application of the cantharidinates is not rational, for they thus only produce irritation. Liebreich says that in hundreds of injections made by him, there has been no more danger to the patient than from the use of mercury or arsenic.

Specific Treatment of Pneumonia.—Neisser (Deutsche Medicin. Wochenschr., 1892, No. 25, p. 593) has reported three cases of pneumonia treated by means of injections of blood-serum. The first patient was seen on the third day of his illness. The lower lobe of the left lung was infiltrated, and the sputum contained virulent diplo-bacilli. An injection of 130 c. c. of serum, obtained from a pneumonic patient two days after the crisis had occurred, was made into a vein of the arm. The temperature at once began to decline, the pulse to diminish in frequency, copious perspiration occurred, and convalescence was uninterrupted. The second patient was seen on the fourth day, and presented infiltration of the left lung posteriorly. An injection of 70 c. c. of serum, obtained from the first patient two days after the crisis, was given. Defervescence soon set in. A week later a pleural effusion was detected, and relieved by puncture. Fifty c. c. of the fluid thus obtained was used for injection in a patient who in the course of an attack of influenza was seized with a chill, whose sputum contained virulent diplo-bacilli, and who presented other phenomena of pneumonia. The temperature at once subsided, perspiration set in, and improvement manifested itself. The temperature remained above normal, and a slight pleural effusion formed, but recovery rapidly ensued.

A Substitute for Decalcified Bone in Senn's Discs.—Baracz (Centralbl. für Chir., No. 23, 1892) states that in experimenting with Senn's discs the idea struck him that decalcified bone might be replaced by some other and more readily available material, which could be used by the practical surgeon without much preparation, and consequently with less trouble. After trials of numerous edible vegetables, such as potatoes, turnips, and carrots, from which sections of firm, flexible, and moist discs can be obtained, the author found that the most suitable substance for his purpose was afforded by the Swedish turnip. Sections of this vegetable, it is stated, form a reliable material for use in gastro-enterostomy and in establishing intestinal anastomosis, and one which can be more readily obtained and prepared than decalcified bone. That sections of fresh turnip present a trustworthy substitute for decalcified bone is shown by the results of the author's experiments on animals, and also by the success of an operation for gastro-enterostomy which he performed on the human subject early in May. The results of this operation, which was performed for the relief of carcinoma of the pylorus, had, up to the date of the publication of this paper, been very favorable.

A Formula for Diabetes.—A formula for diabetes is proposed by Dr. Benjamin Ward Richardson, of London, and in speaking of it he says: "It forms the most useful prescription I have ever used in diabetes." The following is the recipe:

℞ Codeinæ alkaloid. gr. iij.
Alcoholis, ʒ ij.
Sol. hydrog. diox. (10 vols.), ℥ ij.
Aquæ destillat., q. s. ad ℥ xij.

M. Sig.: A tablespoonful in a wineglassful of water three times a day.

It will be observed that the dose of codeine is small—but one-eighth of a grain three times a day—and, with the exception of the peroxide of hydrogen in the form of a solution, the recipe contains no other medicament. The secret probably lies in the use of the peroxide, which has such a pronounced effect upon micro-organisms and thus prevents gastric infection.—*Summary.*

FIG. 1.

FIG. 2.

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Original Articles.

TREATMENT OF PROLAPSUS ANI, OR PROCIDENTIA RECTI.

BY THOS. H. MANLEY, M.D.*

[Continuation of article entitled "A Few Notes on the Causes and Management of Prolapse of the Anus," which appeared in the last number of the AGE.]

The treatment of eversion, or protrusion externally, of the terminal segment of the lower bowel should be directed to special circumstances and conditions.

Bearing in mind the singular analogy between the ætiology and clinical history of infantile hernia and rectal prolapse, in children, we naturally rely on simple tentative measures in ordinary cases.

This infirmity is so common, particularly in boys, that there is scarcely any intelligent old woman but is able to relieve it promptly and safely. They apply a little sweet-oil on the turgescent mucous membrane, and by a species of moderate *taxis* press the mass through and above the ring—the external anal sphincter. If much spasm be encountered here, pressure is kept up until the muscle relaxes. Then a pad is applied over the anus, and retained in position by a bandage.

This, indeed, is all that is necessary in simple, uncomplicated cases. But there are those in which, though replacement is easy, relapse is so persistent that the parts become inflamed, excoriated, and ulcerated, so that the presence of the pad and bandage becomes a source of much pain and misery. In these cases a searching examination must be made for the causes in operation.

A case of this description came under my observation a year ago. The patient, a bright, active lad, six years old, was suffering from an ungovernable prolapse of the rectum, which all measures that had been employed by other practitioners before I saw him failed to relieve. I examined the rectum very carefully, and could find nothing there to account for it. The sphincters contracted well on my fingers, and I could find no growth or excrescence within the bowel which might produce an irritation. I satisfied myself that the original trouble was elsewhere. Now, on closely questioning the mother, she told me that it always came down when he urinated, and was then very painful. Passing a probe into the urethra, I almost at once struck a calculus. Three days later I performed a perineal urethrotomy, removing three urethral calculi, each as large as a small pea. After this there was no more prolapse. The violent straining in urination, the spasmodical contraction of the abdominal muscles, caused something to "give." Had he a tendency to hernial disease, he must have crowded an enormous volume of viscera into the scrotum; had a radical operation been performed for the hernia, with the urethral obstruction overlooked, the operator would have been condemned, and most certainly the patient would have been much worse off than if nothing had been done.

Chronic prolapse of the rectum in the adult, unlike that in the child, is not disposed to spontaneous recovery. When once well established it is a most loathsome and painful affliction. Fortunately it is destitute of any elements of malignancy, and in every instance in a patient capable of supporting an operation it is speedily and permanently curable.

In order to effectually dispose of the everted mass, various measures have been resorted to. We should bear in mind that the pathological basis of the malady consists in a diminished resisting power of the external sphincter; a turgid, congested state of the vessels in the mucosa; and a low grade of inflammatory hyperplasia, with a free

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transudate into the cellular tissue. The mucous and submucous tissues have become so hypertrophied that there is an actual excess of tissue within the sphincter; and this tissue, by its weight in the upright posture constantly pressing against the muscular outlet, overcomes the resistance and favors hernia of the bowel.

In cases of moderate severity, then, when we are familiar with the causative groundwork, we may commence treatment by a brisk mercurial purgative. Banks, of Dublin, Ireland, long since demonstrated the intimate relation of the hæmorrhoidal with the hepatic circulation through the portal system. He showed that in many phases of piles they were promptly susceptible of relief through medicinal agencies addressed to the hepatic organs; inflamed hæmorrhoids moderating in their course and violence under the use of sinapisms or blisters applied over the right hypochondriac region, and the bleeding variety yielding, in mild recent cases, to free purgation. Accordingly, we may commence treatment by the administration of an active hepatic aperient, after which the patient should be placed in the dorsal or lateral decubitus and kept in this position for one or two weeks.

Rest is a most powerful adjuvant here. We can see that by placing a man on his back the column of blood ceases to ascend against gravity. The absorbents rapidly dispose of inflammatory deposits, the overstrained muscular fibre is relieved, involution rapidly advances, and the work of functional restoration proceeds to a wonderful degree of perfection.

In a more stubborn class, when, on account of some vice in the economy, resorption fails to effect any change in the atrophic condition, astringents have been employed—by injection. I have never seen any benefit from them.

In the last and most serious group palliative measures utterly fail, as a rule, and the malady must be treated by prothetic appliances or radical surgical measures. For those very advanced in years, or subject to chronic, incurable disease, nothing should be done further than retaining the intestine.

The bowels should be kept regular. If there be urethral stricture or prostatic urethral obstruction, it should be relieved by dilatation, or the catheter should be regularly employed, in order to prevent abdominal strain in micturition.

The diet should be mainly vegetable, moderate and non-stimulating.

If there be a persistent tendency of the bowel, or the hypertrophied mucous coat of it, to tumble into space, to telescope through the lax, unresisting sphincter, then, in inoperable cases, after it is returned it must be trussed up by any sort of apparatus which will supply ample support. A common T bandage, with a pad, will answer with those unable to secure a truss. When the expenditure of money is no objection, and an elegant and comfortable support is demanded, there is nothing so comfortable as the "Swiss rectal supporter." It consists of a spring-steel girth, comfortably padded and adjusted around the body, while an arm with a pad adjustment fits into the intergluteal furrow, providing the necessary support. The objection to every sort of mechanical support is that they easily get out of order; they readily soil; and, most serious of all objections, this constant pressure over the sphincter tends, in time, to utterly destroy its contractile power, by interstitial changes induced through local pressure on the blood-vessels.

In those chronic incoercible cases which may be designated hernia of the mucous membrane of the intestine through the sphincter, modern surgery has placed within our reach such means as enable us to promptly and radically deal with them. Of all surgical expedients, there is none so definitely curative as excision, or enterectomy.

With an inguinal hernia, in which the prolapse consists of the omentum only, a radical cure may be always promised; for with its complete excision the cause of the hernia is permanently removed. It might be objected that there is not a close analogy between rectal prolapse and an epiplocele, because the former consists of the intestinal tube itself, or its elements, and that a resection of it in so vascular a district as the recto-ischiatic fossa is a serious affair. On superficial examination this cannot be controverted; but when we remember that in prolapse the intestine is altogether *outside* the

cavity of the peritoneum, and that, by modern hæmostasis and the employment of the transfixion ligature, clamp, etc., the complete detachment of the intestinal prolapse may be accomplished without any loss of blood—and the fear of peritonitis is wholly removed—we can readily appreciate its merits.

The linear firing of the anal mucous membrane, with the painful ulceration which ensues before scar tissue is formed, is both tedious and unreliable. The same may be said of caustic fluids when applied for similar purposes.

Cuneiform flaps of the prolapsed mucous membrane, and sections of the sphincter muscle itself, have been removed, with a view to causing a narrowing of the intestine and its outlet. No doubt, in certain properly selected cases, these procedures serve a useful purpose, but they are often incomplete in their results. Cases which have been treated by incomplete measures of various descriptions have come under my observation with relapses which were as troublesome as the disease before treatment.

The first case here cited is a fair illustration:

Case 1.—Mrs. Elise M., a widow, native of Canada; age, 46. General health good. No hereditary history of anal eversion. Has had two children. Her present trouble dated from the birth of her first child, 22 years previously. For five years she consulted no one, being able after defecation to return the prolapsed mass herself. In time, however, it commenced to annoy her more and more, so that she finally sought medical relief—this was in the sixth year after its appearance. Injections were used, which first aided her, but after a time they were unavailing. The falling mass then became uncontrollable unless constantly supported with a pad.

Four years before I saw her she had been operated on at Ann Arbor, Michigan, the actual cautery being employed. She was at that time confined to bed four months. After treatment she had entire relief for six months, when the prolapse gradually returned in greater volume than ever.

She was referred to me by Dr. James D. Reilly for surgical treatment in the spring of 1888. On April 12th of the same year I operated on her, under cocaine, resecting the entire mass. It consisted of the mucous and submucous coats, with a large mass of hypertrophied, adventitious tissues. The muscular coat was not involved. Union was rapid and uninterrupted. She left the hospital on the fifteenth day; and in a letter dated May of this year she informs me the result has been most gratifying in every particular.

The appearance in outline, in the illustration (frontispiece, Fig. 1), is that which it constantly possessed. Being continually extruded, it was so tender and sensitive that in sitting she had to rest on one buttock only, and rest on her side or abdomen while in bed. It will be noted that the lower semilunar folds of the rectum are rolled out, separated by a series of furrows and depressions.

Case 2.—This was a most remarkable case in more respects than one, for the afflicted patient was in a most distressing condition for so long a time and with so little prospect of relief that he was prepared to undergo almost any sort of ordeal that afforded any prospect of recovery from a condition which rendered him entirely unfit for any kind of physical labor. The patient was a German, 40 years old; married; no hereditary history. From his personal history it could not be gathered that there was any special exciting cause. There was no obstruction along the urinary path, and he never had hæmorrhoids. His present infirmity was comparatively recent, as it only appeared about ten months before he came into hospital. He said he was aware of its presence first by finding his shirt and the seat of his trousers blood-stained, in changing them. This was soon followed by soreness and increase in volume. As is commonly the case with those suffering from chronic prolapse, at first he was able to replace it himself, but in time the sphincter was so tightly contracted on it that he would be obliged to call in a physician to reduce it.

Having discovered nothing special in the rectum to account for the condition, it was determined to amputate the bowel. It may be said that the sphincter was so relaxed when he first came under observation that it would admit the four fingers with ease. The surface of the extruded bowel was of a deep

livid hue, and so excoriated and fissured that the slightest touch would cause a capillary oozing. After the patient was examined and the prolapse was reduced, he was given a scruple of calomel and put to bed. It was intended to operate on him the following week. After the mercury acted he expressed himself as being greatly relieved. For various reasons not concerning the patient, the operation was postponed another week. It was noticed that under an abundant and nutritious diet, and rest in bed, his general appearance was greatly improved.

Finally, as the time was approaching for the operation (March 22, 1892), he became squeamish and declined interference, as he said that now, unless on very great straining, nothing would come down. And, true enough, it only descended, at the time the photograph was taken, about one-quarter its former volume. (Fig. 2).

After another week he left the hospital; and reporting to me, August 15th, he said: "I am at work every day, and have had no trouble at all with my passage since I left the hospital."

This case teaches a most valuable lesson in the direction of conservatism, and demonstrates how mutilations and dangerous operations may be often wholly dispensed with if we only remove impediments to restoration to health and give nature a chance.

Technique of Operation for Resection; Enterectomy in Prolapsus Recti; Preliminary and After-Treatment.—The day preceding operation the patient should be put into bed and given a full dose of a saline purgative.

On the day of operation, in the morning, the lower intestine should be thoroughly washed with cleansing injections, as far up as the sigmoid flexure. The surface of the skin should now be shaved and scrubbed for an area of three or four inches around the anal aperture or herniated bowel. This being completed, aseptic gauze dressings are applied, which are retained until the hour for operation arrives.

The question of anæsthetics is an important one. The great drawback to ether or chloroform is the tendency to violent straining and vomiting which follows their employment, when the field of operation is irreparably smeared and infected by a stream of fluid fæces, just at a time when it is of vital importance that the freshly divided structures be protected from taint. The rapidity of healing and permanency of results very largely depend on securing immediate union after operation. Here cocaine stands without a rival. (For precise methods for its general employment in surgery, see article published in Boston Medical and Surgical Journal for October, 1890, or same in monograph, by myself.) Not only must we discard the preliminaries for pulmonary anæsthetics, but direct quite the reverse, when we employ this analgesic. The patient should have a good, substantial meal one hour before we operate, and just before the cutting commences he should take two or three ounces of whiskey (brandy or wine may be substituted). He is then placed in the lithotomy position.

The parts being again cleansed and douched with an antiseptic agent, a purse-shaped sheath, with a wide pouch on its end, and having its outer surface well oiled, is introduced high up the rectum. Now we commence and pack this with long ribbons of gauze, the free ends remaining in the narrow neck while their bulk is pressed firmly into the inverted base above. This tampon serves the double purpose of confining the fæces and compressing the walls of the intestines so as to moderate arterial hæmorrhage and prevent the cocaine solution from too quickly entering the general circulation through the venous channels.

This being complete, the radial subcutaneous injection of cocaine is commenced, and is rapidly continued until the entire circumference of the prolapse is amply charged. Not more than four punctures of the needle are required, nor more than one to one-and-a-half grains of the salt is necessary. Now, by a cautious but rapid manipulation, we at one and the same time diffuse the injected cocaine and fully dilate the external sphincter. This being accomplished, the entire prolapsed intestine or mucous membrane is seized with the left hand, while with the right the needle and suture are taken up and a cobbler's stitch of good, strong, chromicised catgut is passed the entire distance around. This suture should pass within a quarter of an inch (seven millimeters) of the cutaneous

border, at the distal end; at the proximal end it must go far enough up to fully include all the lax tissue. This suture must be inserted firmly enough to securely control all hæmorrhage, yet not entirely annihilate the circulation—else we will have healing by granulation and sloughing, and not by primary union. This seam being completed, with a keen-edged scalpel the strangulated mass is neatly cut away.

We now employ a fine catgut suture, and with the "over-and-over" stitch bring the divided mucous membrane into complete contact around the entire circle. In order to make asepsis doubly secure, and favor prompt union, the point of a thermo-cautery is run lightly over the exposed parts of the incision.

Having freely irrigated again, we commence to displace the conical tampon by removing one ribbon of gauze at a time until all can be easily withdrawn.

A one-grain opium suppository is now introduced, after which a small pledget of iodoform gauze is inserted, and the operation is completed. Enough opium must be given after operation so that the bowels shall be confined for a week. The patient must be kept in bed for eight or ten days. After the removal of the gauze on the second day, there should be nothing more to do.

It will be seen that this is essentially the same as "Whitehead's operation" for hæmorrhoids. It is, with the exception of cocaine anæsthesia and the prophylactic suture; and it is the operation which I have employed during the past four years in severe cases of piles.

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ACUTE MILIARY TUBERCULOSIS.

CLINIC BY JAMES S. ANDERS, M. D.

The patient from whom these specimens have been taken, gentlemen, was a man 48 years old, single; laborer by occupation. His father died of heart disease, his mother and two of his sisters of phthisis. He has a brother still living and well. His own previous history was without event until about five years ago, when he had acute articular rheumatism; was in this hospital on account of rheumatism for several weeks. He has always been a hard drinker, and would go on periodical sprees. He came to the hospital on October 28, 1891. Two weeks before he was admitted he began with pains in his head, a little later pains in his loins, and still later in the extremities also. He himself thought these pains were due to rheumatism. He, however, gave a history of fever, more especially at night. The fever was followed by profuse sweating.

When admitted, his temperature was normal, pulse not much above normal as to rate, though it was somewhat weak. He, however, looked very ill, quite cachectic, and slightly jaundiced. He was extremely dull, yet, when aroused, fully conscious. He answered questions slowly; had a clumsy tongue. Tongue was furred, dark brown; during the last few days he had sordes on teeth and lips. A physical examination of his chest—for he had some cough in connection with his fever—led to the detection of a very little area of consolidation over the upper portion of the right lung, posteriorly, just below the spine of the scapula. Here we got slight dullness on percussion, and subcrepitant râles on auscultation, with bronchial breathing and prolonged expiration. He had considerable cough, but little expectoration; the cough was probably due in part to bronchitis, for we also heard subcrepitant râles both anteriorly and posteriorly over the bronchi. The liver extended three fingers'-breadth below the free border of the ribs, and over the body of the liver there was considerable tenderness.

He had, very soon after admission, an almost typical intermittent temperature, the tracings of which I would like to show you to examine for yourselves carefully. Notice that on the third day after being admitted he had an abrupt rise of temperature, then a sudden fall, then another rise after two days, again another sudden fall. Each day that he had a rise of temperature he had slightly marked chilly sensations, and then, as the fever declined, slight sweating. You notice that for the first week or ten days the type of the temperature curve was malarial. During the whole time he was in the hospital—six weeks—the physical signs underwent very little change, yet he was from the beginning a very ill man.

I wish to call attention to one more thing in the history, namely, that he developed toward the end of his days a decidedly typhoid condition. As you see by the temperature, which fell to normal and even became subnormal, he died in collapse.

Now a word in regard to the specimens; we have them here, and I think you would probably get a better idea if I were to pass them around. A post-mortem examination of the body was made a couple of days after death, at which I was not present. My resident, Dr. Janney, however, prepared a report of the autopsy, which I will read. On opening the body the serous membranes were found studded with tubercles. The heart was normal in size; the liver, of which you have a portion, was enlarged, pale, fatty, studded over the surface with tubercles. You do not see them very plainly to-day, but if you were to look at the liver under a microscope you would see tubercles everywhere. It is difficult to see tubercles in the liver even at the time of the autopsy. The stomach was somewhat distended, and the spleen enlarged; the kidneys were pale, fatty, and the parenchyma almost wholly gone. The omentum was studded with tubercular nodules.

Now, in the light of the notes made at the autopsy, of course the diagnosis becomes clear, namely, that we have here a case of acute miliary tuberculosis. Whenever we have tubercles in the liver you may be certain it is an acute miliary tuberculosis, secondary to a tubercular focus in other parts of the body.

The question then is, how did this condition arise in this man's case? He had a few small nodules in the lungs, but they did not appear to be old or cheesy; hence we cannot say positively that he had primary tuberculosis of the lung, followed by general miliary tuberculosis. A few of the bronchial glands appeared to have undergone caseous degeneration, and these were probably the starting point of the trouble. These tubercular glands were probably situated near a vein, and having begun to take on activity they opened the veins, and a large mass of cheesy matter was disseminated rapidly. The trouble may arise in other ways. We do not have here, however, any tuberculosis of the intestines; consequently we do not attribute the tubercular deposits on the peritoneum to primary disease of the intestines, as is so often the case. It is also very easy for the peritoneum to become affected when the pleuræ are the seat of the tubercular infection. It is well to remember that here we had tubercular deposits on the peritoneum which did not give rise to any great degree of inflammation of that membrane. On the other hand, it is true that you see a great deal of inflammatory change in the peritoneum in many cases; these cases are usually chronic in their course.

The diagnosis in this case was extremely difficult during the life of the patient. We thought of all sorts of things with which he might be afflicted. We always thought, however, that he had tuberculosis, for various reasons. In the first place, from that temperature chart you will see that the diagnosis of intermittent fever might easily have been made, because the temperature curve is very like that of intermittent fever. But if this had been a case of actual intermittent fever, then on the days that he had no chill and no fever he would not have been so dull and so profoundly ill as he was; for that reason we do not attribute all his trouble to malaria. We found that he lived in a malarial district, yet under all of the circumstances we had not the right to make the diagnosis of malarial fever. Then the question of typhoid fever arose; but we eliminated typhoid from the fact that he had not merely an irregular, but an intermittent, temperature. We had also here night sweats, slight jaundice, and the absence of the characteristic typhoid eruption. There was present, however, brown dry tongue, some tympany, and other symptoms that pointed toward typhoid fever. And then came up the question finally as to whether this could not be a case of intermittent hepatic fever of non-malarial origin—slight occlusion of the bile-ducts followed by chronic jaundice, and then a sort of intermittent fever, the fever being due to septic absorption, on account of the fact that around this place of occlusion there are points of suppuration. But there could not be obtained a previous history of hepatic colic. The diagnosis of acute miliary tuberculosis was made by exclusion. In

all cases which I have seen of acute miliary tuberculosis in which the liver was very much affected, I have seen this peculiar form of intermittent temperature. The case before you belongs to that class of cases of acute miliary tuberculosis which are protracted in their course, the fever having lasted two months; cases are sometimes much briefer. When you have the signs referable to the lungs predominating, three or four weeks is the usual length of time. There is another form which runs a very short course, in which the nerve symptoms predominate. The diagnosis of these cases during life is not always possible.

One thing was omitted; the eye-ground was not examined. Very often you find tubercles in the choroid, and when you do the diagnosis is made with certainty. But in my patient the ophthalmologist had examined the eye and said there were no tubercles present; the autopsy subsequently proved that there were. I do not wish to say anything derogatory to the ophthalmologist, but I do desire to say it is very difficult to detect the tubercles in the eye. Looking at these specimens, you notice that both the liver and kidneys are pale and studded with tubercles. It is well to remember that you have these fatty changes taking place in connection with tubercular deposits.

The patient whom I now show you is a German, 28 years of age, male; single; occupation, laborer. He was admitted to the male medical wards of the Philadelphia Hospital on November 23, 1891, giving the following family and personal history: His father died of heart disease; mother still living and well. He had measles when three years of age; subsequently no disease until the onset of his present illness, which began October 16th. On that day he received a severe wetting, and on the same evening he began to feel chilly, followed by fever and a great deal of headache, and was unable to sleep that night. The next day he had considerable annoying cough, with very scant expectoration; two days later, October 18th, he developed diarrhœa, with a great deal of pain while at stool. Number and character of passages could not be ascertained.

When admitted, November 23d, his face looked swollen and cyanotic; tongue large, flabby, heavily coated, and red on the edges and tip; respirations about 25, rather deep and slightly labored; pulse not much above normal, and of good strength. His temperature at the time of his admission was 102° F., dropping to 99° on the next day; subsequently it rose to 102° F., and remained at that height for some time. The physical signs—for he was coughing when he came in—were those of capillary bronchitis, and we feared he might develop catarrhal pneumonia; two days after admission, percussion resonance over the right side was dull in places; two days later, lower lobe almost entirely consolidated, and it was doubtful at the time whether, even in view of his history, he had catarrhal pneumonia or croupous pneumonia. This, however, was soon cleared up, for on the day following he developed slight consolidation on the left side at the upper portion of the lower lobe, near the spinal column. This, of course, we regarded as being of a catarrhal nature. The area of consolidation continues still over the lower lobe on the right side. His sputum, which was quite scant on admission, has become purulent, and the expectoration much more free. I have here a specimen of his present sputum, which looks like pus itself. It is well to reiterate here the physical signs—dullness on percussion over the lower lobe on the right side and over a small portion of the lower lobe on the left side; increased vocal fremitis over the areas of consolidation; we also find on auscultation more moist râles than before, and, in addition, these have a decided metallic ring. We have also in addition—and you always find these when the area of consolidated lung tissue extends to the surface—more or less pleurisy, as shown by the fact that we have here at the end of inspiration a few crackling friction râles. It is very difficult to distinguish these from the moist râles heard in the tubes. You hear the former only, as a rule, on inspiration; the latter you hear both on inspiration and expiration. They have, however, very much the same quality. The case has been progressing favorably, as you see by the temperature chart.

But I want to call your attention to one

thing in particular in regard to the course of these cases. When catarrhal pneumonia occurs among children it apparently runs an acute course, but in adults its course is subacute or chronic. Notice that here we have had a period of high temperature lasting more than four weeks, the temperature to-day being normal for the first time. The cough has lessened; amount of expectoration about the same. The night sweats, from which he suffered when admitted, have almost entirely ceased.

The diagnosis of these cases demands a moment's attention. It is a very easy matter, when a large area consolidates, to mistake cases of this kind for croupous pneumonia. You should be guided by the history of these cases—in the first place the mode of onset, etc. Having found one large area of consolidation, we look, of course, for areas of consolidation occurring elsewhere, and should we find them we have a good diagnostic sign of catarrhal pneumonia. In cases of lobular pneumonia the temperature rarely reaches 104°, and is very irregular; we have, in truth, for these cases no definite temperature curve. In croupous pneumonia there is a different curve, especially as to length of time, the crisis occurring, as a rule, between the fifth and seventh day. We have had here no rusty sputum, such as we would expect in croupous pneumonia.

There is even greater danger in mistaking cases of lobular pneumonia for cases of acute miliary phthisis. We must remember that acute miliary tuberculosis is often intimately associated with catarrhal processes such as we have here. In other words, you may have a case of lobular pneumonia terminating in acute miliary phthisis. You should from time to time have the sputum examined, in order that your diagnosis of acute phthisis may be at once established. We have, however, a great many cases of lobular pneumonia that terminate as this is about to do, even though resolution occurs very late. On the other hand, we have a great many cases of acute miliary tuberculosis that are such from the beginning.

Now, there are some points of difference I would like to call your attention to. In the first place, in acute miliary tuberculosis you have the history of fever before the onset of cough: in cases of catarrhal pneumonia you have the previous history of capillary bronchitis. You have most generally in cases of acute miliary tuberculosis either a family history of tuberculosis or a former history of tubercular trouble in the same individual, such as disease of the bones, pleurisy, etc. This is absent in this case; he has no family history pointing to tuberculosis, and this was thought to be the valuable diagnostic point. But temperature usually runs a little higher, and emaciation is developed more rapidly, in acute miliary tuberculosis than in catarrhal pneumonia; the consolidated area is acute, phthisis is larger, and it leads often to the signs of expectoration in the lungs. When there is any doubt remaining, you must examine the sputum repeatedly. You should also examine the eye-ground.

The treatment in this man's case has been free stimulation, a liberal diet—which, however, has been liquid throughout. The treatment that the man has had has caused a steady decline of temperature. We gave him in the way of stimulants: One-half ounce of alcohol every three or four hours; carbonate of ammonia, 5 grains every three hours. This is about the first treatment for these cases at the beginning. Whenever you have resolution delayed, as we did in this case, you should use turpentine. We used turpentine in this case, and since its administration the patient has progressed a little more rapidly.

This man is aged 66 years; born in England; occupation, bookbinder. He was admitted to the male medical wards of the Philadelphia Hospital on November 29th. When he was admitted he gave the following history: Lost a half-sister from phthisis; father died of heart disease, mother of old age. He had always been well as a child; indeed, perfectly well until 1875, when he rather suddenly developed a severe cough, with muco-purulent expectoration, which lasted a whole year. The following year he had three hæmorrhages of the lungs, rather profuse, and during the same year an attack of articular rheumatism. He recovered from these affections apparently, when he began to be troubled with shortness of breath. When admitted, November 30, 1891, the skin

of the face was markedly cyanotic; breathing was quite rapid, inspirations very quick and short, expirations rather prolonged in comparison. He complained of no other symptoms, except the dyspnœa and general weakness. A physical examination of his chest was made. On inspection it was observed that the left side bulged a little, intercostal spaces were partly effaced; that side was almost motionless during respiration. The right side was slightly depressed in the region of the nipple. We made palpation, and found that vocal fremitis was absent on the left side. The apex beat of the heart was near the right edge of the sternum. On percussion there was flatness anteriorly and posteriorly on the left side over lower two-thirds of chest. In the axillary space there was found tympanitic resonance two or three inches above the lower margin of the left lung. On auscultation we heard no respiratory murmur over same area either anteriorly or posteriorly. Over the upper third there was a weak vesicular murmur and prolonged expiration, accompanied by a wheezing râle.

The physicial signs in this case pointed to pleurisy with effusion. There is not much danger of mistaking this condition for any other acute inflammatory condition of the chest, and yet the mistake has been made repeatedly of confounding this disease with pneumonia. Let us remember that the physical signs of the two diseases are entirely different. Here we have a man 66 years of age; you should remember that there is no chill, no stitch in the side, as in about one-half of the instances where croupous pneumonia occurs in the aged. We have, however, the physical signs to help us establish a correct diagnosis if we are careful. We have, for instance, in pneumonia no flatness, but merely dullness. On auscultation in pleuritis, we sometimes have bronchial breathing near the upper margin of the fluid, it is true, but that bronchial breathing is diffuse, and you will never hear it at the extreme base, as in pneumonia. There is no vocal fremitis in pleurisy, while in pneumonia it is increased. In croupous pneumonia you get not only increased vocal resonance, but actual broncophony; in subacute pleurisy with effusion, absence of this sign. All of these points should be carefully borne in mind.

And now, the points of interest in connection with this patient to which I wish to call your attention are only two. In the first place, I want to call your attention to this area of tympanitic resonance in the infra-axillary space, the semilunar space of Traube. It should be remembered that in pleurisy with acute effusion in children you find tympanitic resonance extending high up in the axillary space when it occurs on the left side. You should remember, too, that this takes place in the adult when the amount of effusion is not sufficient to fill the whole pleural cavity. The lung retracts from the chest wall by virtue of its own elasticity, hence we find that the lung is not compressed until the pleural cavity is nearly filled. Neither is the diaphragm depressed up to this point. Now, so long as the diaphragm is not pushed down, the lung maintains its upward-pulling power upon the diaphragm during respiration; and so long may you have, as in this case, tympanitic resonance on percussion in the left infra-axillary space, as well as the peculiar breath sounds heard over the upper part of this man's chest. It is an interesting fact that you may have a large effusion and no positive pressure on the lung.

This man, when admitted, was tapped by my resident, Dr. Janney, on account of the great dyspnœa present, and from his left pleural cavity we took 60 ounces of a sero-fibrinous liquid. After this tapping, the man at once became quite comfortable, and in half an hour he was asleep. Even while the operation was going on, respiratory murmur became more marked anteriorly, as well as posteriorly over the upper portion of the lung. This relief, however, lasted only for a few days. On December 5th he began to have dyspnœa; and the following day he was again aspirated—this time in the sixth intercostal space in the right side, in the axilla line—and 70 ounces of a similar liquid were withdrawn. Again relief was almost immediate, and (as shown by the colored lines on the man's chest) the mass of liquid greatly decreased. We have here the upper line indicating the upper margin of dullness on percussion while the man was sitting, before

tapping; the next line, lying, before tapping; and the next, sitting, after tapping.

I would not advise you under all circumstances to withdraw as much as 60 or 70 ounces. You may do so, however, if you find the patient becomes more comfortable as you proceed, and there be no fever present; but you should always look out for certain dangers. Thus, a slight tendency to syncope, or an attack of coughing, or the rapid coming on of dyspnœa, should cause you to desist at once. The dangers are that you will have a sudden determination of blood to the lungs and heart, on account of the withdrawal of the fluid, overpowering the latter. There is no harm in tapping again and again, and it is better always to withdraw a small quantity, and repeat the operation in the course of a couple of days, than to withdraw a large quantity; especially is this true in cases where the temperature curve at the time of the operation shows that there must be present a good deal of inflammatory action.

Philadelphia Hospital.

ABDOMINAL AND CRANIAL SURGERY, WITH REPORT OF CASES.*

BY THOMAS J. MAXWELL, M. D.

In presenting this paper to the State Society I have been governed in my selection of a subject, and its treatment, by what I most enjoy in the productions of others—a plain, practical, direct treatment of the subject under consideration, without tiresome theorizing or wordy circumlocution for literary effect.

We meet in our State Society from year to year to enjoy the fellowship of old acquaintances and to make new ones; to interchange our thoughts on the vital topics of the day; to tell of our successes and failures, of our trials of the new or our faith in the old; thus acting upon each other as a ferment, and thereby realizing the force of that wise saying of the Book of books: "As iron sharpeneth iron, so doth the face of a man his friend."

I bring this time my contribution in the form of a clinical report which will, I hope, present something of interest in two departments of surgery, namely, *abdominal* and *cranial*.

Let the importance of the subject be my defense in occupying your time with asepsis, antisepsis, or surgical cleanliness. Do not say the subject is threadbare and tiresome; it is freighted with the lives of millions. It is hard for us to realize the potency for evil of the myriads of organisms that fill earth and air and water. Ubiquitous spirits of evil. We need "line upon line, precept upon precept, here a little and there a little," to remind us of their presence and potency.

No one is so fully competent to understand this subject of asepsis as he who has had training in bacteriology and the culture of micro-organisms. If he deviates an iota from observing all of the details of his experiment, it fails.

Before the high priest went into the holy of holies he washed his body in pure water and put on his clean linen garments. Being *ceremonially* clean, he was then prepared to make atonement for the sins of the people.

The operator and all of his belongings must be *surgically* clean before he is fit or prepared to make atonement and take away the (result of) physical sins of his patient. Pathological conditions are the result of the breaking or violation of the laws of our being. "Sin is a violation of law." What is it to be surgically clean? It is not enough to wash in soap and hot water and remove all of the macroscopic dirt, because these microscopic bacteria may lurk under the nails of your hands, hide in the mouths of sebaceous follicles; therefore with care we should remove them, by knife and burs, from the nails, and by ether and alcohol dissolve them out of the skin, then kill what is left by immersion in a solution of the great germicide, corrosive sublimate. It would take up the whole scope of this paper to answer the question: What is it to be surgically clean? To be brief, we insist upon every detail being religiously followed out in the preparation of the operator, assistants, patient, instruments, sponges, needles, sutures, and ligatures. After all the rules of antisepsis have been observed in the preparation, there is great danger of violating them during operation. A sponge or an instrument may be

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inadvertently laid upon upon a table, upon articles of clothing, or upon some other surface not scrupulously clean; so it is necessary to cover with aseptic towels the body of the patient exposed for operation, and the table as well, in order that an instrument accidentally dropped or laid down may not become contaminated. The hands of the operator and assistants are protected by having all surrounding surfaces aseptic that they are liable to touch during operation.

ABDOMINAL SURGERY.

Preparation of Patient for Laparotomy.—Two grains of quinine are given three times daily to the patient for three or four days before the operation. Eight grains are given the morning of the operation. A large teaspoonful of compound liquorice powder is given the morning of the day before the operation; and a large injection of salt and water (teaspoonful of salt to the quart of water) is given the morning of the operation. The patient takes a warm soap-and-water bath the evening before operation. The pubes having been shaved, a compress saturated with a solution of corrosive sublimate is applied over the abdomen the morning of operation, and kept *in situ* until ready to operate.

Patient takes a light supper the evening before; a soft-cooked egg, a bit of toast, and a cup of coffee, the morning of the operation.

Technique of Operation.—Incision four inches long is made through the linea alba, terminating "two finger-widths" above the pubic arch. Pedicle is tied with a plaited silk cord, iron-dyed preferred, by means of a Staffordshire knot which cannot slip, and dropped back into pelvis. Abdominal incision is closed by silk sutures. Each suture is armed with two needles, one at each end, and introduced from within outward, catching up about a quarter of an inch of peritoneal border and passing through the entire thickness of the abdominal wall. After these sutures are all introduced, the sponge protecting the bowels is removed, the sutures rapidly tied, the part dusted with iodoform and dressed with eight or ten plies of sublimate gauze, and over this a pad of absorbent or salicylated cotton is secured by broad flannel bandage.

This hasty synopsis is a mere outline giving salient points.

After-Treatment.—Patient is put to bed, and hot bottles of water placed around the body so as to restore temperature and promote reaction from shock. Should not be permitted to talk much If he should complain of pain, a hypodermatic of morphine ¼ grain, atropine $\frac{1}{150}$ grain, may be administered, but it is best not to give it unless urgently indicated. Patient should be turned from back to side as comfort requires. If vomiting is troublesome, sips of hot water are given, or teaspoonful doses of Tarrant's Hoff's malt, which I have found more effective in allaying nausea than any other medicine. Give no nourishment durthe first twenty hours. I have abandoned the use of opiates as far as possible, and begin with a saline on the second day after operation, so as to secure early and regular evacuations of the bowels, instead of keeping them confined for the first week as was formerly the practice. Six grains each of the sulphate of magnesia and soda in a wineglass of water, given every two or three hours, answers well. Half the sutures should be removed on the eighth and half on the tenth day.

With this brief outline of operation and treatment in cases of laparotomy, we now pass to a short clinical history of seven laparotomies performed within the year since our last meeting, five of which were done for the removal of ovarian tumors.

Case 1.—Mrs. H. L. E., of Ottumwa, aged 27; mother of two children. Polycystic ovarian tumor of left ovary. No adhesions. Patient made a good recovery in four weeks. Nothing especially marked in convalescence.

Case 2.—Miss M. C., of Illinois, 27 years old; began to menstruate between 15 and 16 years of age; always regular in the monthly sickness except twice, when she had her menses twice during the month. The last time, two years before, she noticed that she was enlarging. She first became aware that she was growing larger, and that a tumor could be felt in the centre and low down in the abdomen, in the summer of 1890. This continued to grow until she attained the size and appearance of pregnancy at full term, when she presented herself for operation—

in September, 1891. She entered St. Joseph Hospital, where I operated and removed a polycystic tumor, estimated weight 16 to 18 pounds. There were no adhesions or complications, so we were able to remove the tumor in a few minutes from the time of making the first incision. Recovery was uneventful; she left the hospital in five weeks for her home. Her menses have been regular since removal of tumor, and general health fairly good.

Case 3.—Miss B. H., unmarried, aged 20; always enjoying good health. Menses regular and painless. Some time in the summer of 1891 began to notice some abdominal enlargement. This increased steadily and rather rapidly until the last days of December, when she presented herself to Drs. McClellen and Meacham, of Washington, who diagnosed the case to be an ovarian tumor.

I operated on January 18, 1892. Removed a parovarian cyst of about 2½ gallons' capacity; the contained fluid was as clear and limpid as spring water; the cyst was, of course, single. The tumor developed from the right fallopian tube. The ovary was healthy to all appearances, but was carried up onto the anterior face of the tumor's pedicle. The fimbriated extremity of the fallopian tube was spread out over a large space of the anterior face of the cyst. We considered the feasibility of saving the ovary, but concluded to remove it, as it was impossible to free the tube from the tumor; and to leave an ovary to discharge an ovum into the abdominal cavity might complicate the case more than removal; and then there might arise disease of the ovary from the necessary dissection to free it from the pedicle, which might eventuate in the formation of a true ovarian tumor.

The patient recovered without a single bad symptom. I was ably assisted by Drs. Meacham and Boyse, of Washington, Dr. Meacham taking charge of the after-treatment. The operation and after-treatment were conducted at the home of the young lady.

Case 4.—Miss K., of Denver, Col., 25 years old, discovered a tumor in the right iliac region about twelve months before presenting herself for examination, February, 1892. Examination disclosed a tumor the size of an adult head; tumor fluctuated over a portion only, and was quite firm but elastic, and lobulated. Diagnosed a polycystic ovarian tumor. Menstruation had been regularly performed. February, 1892, operated in the amphitheatre of St. Joseph Hospital, the students of the Keokuk Medical College being present at the clinic. Removed a polycystic tumor the size of an adult head. No adhesions or complications. The left ovary had developed the tumor. The patient made an uneventful recovery, except that the bowels remained constipated for nearly a week, resisting repeated daily doses of saline mixture, but responding at last to injection of salt and water. Appetite variable; some nausea during the thirty hours subsequent to the operation, but retching or vomiting was controlled by small doses of Hoff's malt. The incision in the abdomen healed by first intention, as it did in all of the other cases reported, but pus formed round several of the sutures, perfect antisepsis having failed in some way with them. Notwithstanding this slight drawback, she made a very satisfactory convalescence and recovery, being able to be about the hospital the third week.

Case 5.—Mrs. R., widow, 53 years old; has had several children. Ceased to menstruate twelve months since. Discovered a small tumor in right iliac region in August, 1891, which has steadily grown until it has attained the size of a large fœtal head. Tumor fluctuates and is quite movable. Patient's general health fairly good, except that her bowels have been always constipated, requiring the assistance of medicine to produce a motion. Heart's action rather weak, but no abnormal sounds.

At St. Joseph Hospital, April 8th, operated on patient. Abdominal incision about four inches; found no adhesions; tapped and removed polycystic ovarian tumor of right side. Had some delay in the administration of ether, as the patient's feeble heart action required great care. (We usually begin with the administration of ether, then resort to a mixture of equal parts chloroform and ether or chloroform alone.)

There was no vomiting following the operation; during the first twenty-four hours nothing in the way of drink or food was given

except hot water and Hoff's malt. Bowels, from old habit of constipation, did not yield to saline mixture; but became regular, operating kindly every day, through administering 5 drops of tincture nux vomica every four hours. The lady returned to her home in less than four weeks from date of operation.

I am indebted for the case just related to Dr. R. J. Caldwell, of Adel, who diagnosed the case and sent her to me for operation.

Case 6—Hæmatocele.—Miss T., whose home is near Mt. Pleasant; unmarried; age, about forty years. Some time in February received an injury from which resulted pelvic inflammation,with tumor occupying mostly the right iliac region. Her condition varied somewhat, better and worse, until May 2d, when she was suddenly taken with a severe pain in the abdomen, which soon increased to agony.

Dr. McClure, her attending physician, was called, and found her in a state of collapse, but managed to rescue her from apparent imminent death by the administration of stimulants, opiates, and hot applications, so that by the next day she had so rallied that he determined on operative interference—believing it to be the only means of saving her life. I was consequently summoned. It was determined by those present—Drs. McClure, Pitcher, and Maxwell—that an operation exploratory in nature should be made, to determine the nature of the pathological condition and relieve it if possible. This we did by way of laparotomy. Found, on opening the peritoneum, that the omentum was bound down and held fast to the tumor below and also to the bowels above, so that there was no tendency of the latter to escape through the incision, though they were full of gas. On carefully separating the omentum, we opened into what proved to be a hæmatocele containing a clot the size of a fœtal head at term. This was turned out, and the cavity washed out thoroughly with sterilized hot water. There were no fresh-bleeding vessels. The clot was black and mingled with flakes of coagulated lymph. A drainage tube was introduced; abdominal wound closed and dressed. Patient seemed to be in as good condition at the end of the operation as at the beginning, but sank and died during the night following the operation.

INTESTINAL SURGERY.

Intestinal surgery has occupied a large share of the literature of surgery and the interest of the profession generally during the last decade. Experiments on dogs, and operations on the human subject, have done much to determine the laws governing success. Dr. Senn and others have contributed largely to this end. Time seems to be a very important factor in success. The least handling of the intestines, and the shortest time of exposure, are cardinal rules to be observed. Accurate junction of mucous coat to mucous coat, peritoneal coat to peritoneal coat, by means of the Czerny-Lembert method of suturing the bowel, is a tedious operation and consumes much time in its performance. To gain time and simplify the operation, Prof. Senn has invented the decalcified bone plates for use in the various operations for intestinal anastomosis, and he has accomplished much along these lines; but plates are not always at hand, neither have we the material to manufacture catgut rings.

A method less complicated in execution, with the material and means always on hand for carrying it out, and at the same time of universal applicability in all of the enterorrhaphies and enterostomies, is a "consummation devoutly to be wished."

This, I think, is attained in "A New Method of Intestinal Surgery," by H. Widdenham Maunsell, M.D., of New Zealand, as published in the March number of the American Journal of the Medical Sciences. I take the liberty to quote so much of this article as will explain and save reiteration in a case about to be related:

New Clamp for Bowel.—Place a small flat sponge across the intestine, about four or six inches from the part to be excised; transfix the sponge and the mesentery close to the gut with a strong safety-pin; pass the pin again through the sponge on the other side of the gut, and clamp the pin.

Having cut off the cancerous, gangrenous, or injured portion of the intestine, bring together both ends of the bowel with two temporary sutures passed through all the coats of the intestine. The long ends of the sutures are left intact. One is placed at the mesenteric attachment of the gut, and the other (exactly opposite) at the most distant portion of the bowel from the mesentery.

These temporary sutures are very important. They secure the complete peritoneal covering of the mesenteric attachment of both segments of the gut, help to maintain the proper relative position and accurate coaptation of the two cut ends, and facilitate their subsequent invagination through the opening made in the larger segment of gut.

Make an incision in the longitudinal axis of the bowel, opposite the mesenteric attachment, through all the coats of the larger segment of bowel, beginning about an inch to an inch-and-a-half from the cut end; extend the incision an inch to an inch-and-a-half; pass the long ends of the temporary sutures through the bowel and out through the longitudinal incision. By making traction on the temporary suture the two ends of the bowel are brought through the longitudinal slit, at the same time invaginating them. Traction by an assistant on the free ends of the temporary sutures renders easy the introduction of sutures through all the coats of the two invaginated ends of the bowel. Sutures are placed by means of a straight, long, ordinary sewing-needle; sutures of fine horse-hair, silk, or silk-worm gut are thus carried through both sides of the bowel at one thrust—twenty-four sutures introduced by twelve punctures. The sutures are hooked in the middle and cut, then secured by knot. The bowel is now pulled back, and you have it strongly jointed—the peritoneal surfaces together, and the sutures and knots all within the lumen of the bowel. The longitudinal slit is now closed by a continuous Lembert suture of fine silk.

Case 1.—John W., 47 years old, was kicked by a horse last January, the plow striking the pad of a truss in the right inguinal region worn for a rupture of that side. The wound resulted in contusion of abdomen and bowels, and terminated in abscess, which was opened by Dr. Ladd, of Baer, about March 22d. Fæcal matter began to pass the next day, and has continued to do so up to date of operation. I was called to see the case May 12th; and, on consultation with Dr. Ladds of Trau, Dr. Griffith of Vinton, and Dr. Jones of Dysart, it was determined that an operation for his relief should at once be made. The abdominal muscles on the right side were very much thickened by inflammatory products, and numerous pockets of pus were found between different layers. Two sinuses opened on the surface—one over the internal abdominal ring, the other two-and-a-half inches higher up. A line joining the two was parallel with Poupart's ligament. Incision was first made joining the two openings; afterward it was found necessary to carry it upward for several inches. With a good deal of trouble and careful work the mass of perforated bowel was finally separated from its adhesions and brought out. At two places in the ileum the wall of the bowel was destroyed in part, with an intervening portion matted together, with pus pockets here and there dissecting up its peritoneal covering. It was determined to exsect or resect this portion, and join the cut ends by Maunsell's operation described above. This was done, and we were delighted with the easy performance, eminent practicability, and perfect result of the operation. A drainage tube, made of a core of spiral hard rubber surrounded by iodoform gauze, was introduced. The muscular and peritoneal wall of the abdomen was closed by buried catgut sutures, and the skin by interrupted silk; over all a thick dressing of iodororm gauze and a thick pad of absorbent cotton. I neglected to say that the abdominal cavity was thoroughly flushed with Thiersch's solution and hot water. The pockets of pus were all scraped out with a sharp spoon, and washed with sublimate solution.

CRANIAL SURGERY.

Case 1—Trephining for Relief of Epilepsy.—Ida Frances K., 26 years old, has had epilepsy since she was 9 years of age. Has a depressed cicatrix to the depth of one-third of an inch, as large as a silver quarter of a dollar, apparently over the sagittal suture, and equidistant from glabella and inion. Epileptic seizures of the Jacksonian variety. The signal symptom is twitching of muscles of the face, the left angle of the mouth being drawn up. These convulsive movements, extending to the neck, left arm, and leg, becoming general, she lost consciousness. These symptoms would point to the lower portion of the anterior central or ascending frontal convolu-

tion as the focus of irritation from which emanated the explosive nerve-energy. Attacks were sometimes brought on by injury of the cicatrix. There was no regularity about the attacks. Some days she would have numerous seizures; then again a period of two or three weeks would intervene between spells. I operated on this girl at St. Joseph Hospital, at a clinic, Feb. 10, 1892. After due preparation, a large semicircular incision, the concavity of which looked forward, was made down to the bone; turning forward the flap, which included the scalp and aponeurosis of the occipito-frontalis, I removed a button on either side of the sagittal suture, and a quadrangular piece between by sawing across with a Hays saw, lifting it from its attachment to the longitudinal sinus. On applying a weak faradic current to the dura corresponding to the depression—which proved to be just to the left of the sinus—twitching of the angle of the face began, and extended to the neck and arm of left side. Current applied to right side of sinus produced twitching of left leg. The three pieces of bone were thinned, attached to scalp flap by means of catgut ligatures, and when the scalp was turned down they occupied the places from which they had been taken. A few strands of gut were left *in situ* for drainage. The wound was then sutured by a few interrupted stitches; lining of incision dusted with iodoform and dressed with sublimated gauze, and a pad of wool over it confined by bandage.

She made a good recovery. Wound healed without pus; bones united in three weeks. She has had but one fully developed attack since—about two weeks after operation; this consisted of two or three slight twitchings of the face only, without loss of consciousness. During the past five weeks not so much as that has been manifested.

There are some questions of cerebral localization that this case might start, and which need unraveling, but I will not at this time attempt to discuss them, as I have already trenched upon the time of the Society, and this paper has grown beyond my original intent.

Keokuk, Iowa.

LADY BICYCLISTS.

BY G. A. WILLIAMS, M.D.

Bishop Coxe, in addressing the young lady graduates in a Chicago school, said he hoped he might never see any of them astride a bicycle, for it reminded him of the witches of old riding their broomsticks. All these crazes, such as roller-skating, the sunflower mania, Nelly Blyism (that is, a desire to wear men's caps and boots and travel all over the country alone), all slang expressions, etc., are very short-lived. Like the shoals of sand, they are here one day and away the next, and it is generally conceded that a person is much better without adopting them. These particular fads are, as a rule, not taken up by people with a proper sense of decorum; and, although we have the utmost admiration for the woman who can do something clever without making herself too conspicuous, we have yet to meet the heroine of a career who is not brazen and tiresome—it is not her fault, but the result of contamination. No one can elbow the street crowd without losing some of the sweetness we prize in woman; the gain that comes from the outer world—the shop, the rostrum, and the public procession—is more than outweighed by loss of modesty, gentleness, faith, and womanly dignity.

Some say they ride astride the bicycle, others say they do not. This question would certainly be difficult to decide without a close investigation, which would be inconvenient—to say the least. We have already noticed that bicycle-riding is injurious to young women, having a tendency to act as the sewing-machine. The excessive action of the legs keeps the pelvic organs in a constant state of congestion, and must certainly produce certain displacements and various kinds of weakness.

Bay City, Mich.

ABORTIVE TREATMENT OF ERYSIPELAS.

Talamon recommends the employment of a spray of sublimated ether (1:100) in the treatment of some cases of erysipelas. If the infiltration be not extensive, the application is to be continued until vesication occurs; if the involvement be extensive, the central portion is only to be moistened.

Correspondence.

THE STATUS OF MEDICAL LEGISLATION IN OKLAHOMA.

Thinking that an account of the status of medical legislation in Oklahoma might be of interest to some of your readers, I submit the following:

The laws of the Territory require that before one can legally practice medicine he must hold a certificate, which is obtained as follows: If a graduate of a medical college in good standing, on producing a diploma to the Territorial Superintendent of Public Health, together with a fee of $2.00, a certificate of graduation will be issued. If not a graduate, applicant must submit to an examination prescribed by the Territorial Board of Medical Examiners, and if satisfactory a certificate of examination will be issued. The fee for examination is $20.00, one-half of which will be returned in case of failure to pass.

The Examining Board met last at Oklahoma City, July 25, 1892, and examined nine applicants, only four of whom passed. The Board meets semi-annually.

Certificates of graduation have been issued to 171 applicants, five of whom were women. One diploma has been rejected as from a fraudulent college.

Certificates of examination have been issued to 22, all men.

A number of arrests for violation of the law have been made, all resulting in conviction so far as they have come to trial.

We feel that public sentiment is in favor of the law, and that we will soon rank with any of the States so far as medical legislation is concerned.

E. O. Barker, M.D.,
Sec'y. Territorial Board of Medical Examiners.

Guthrie, Okla., August 25, 1892.

A PRIZE ESSAY.

Dr. George M. Gould, editor of the Medical News, offers $100 for the best essay on The Ridiculous Pretensions of Modern Homœopathic Practice. Essay must be limited to 15,000 words, and sent in before January 1, 1893, type-written, with letter giving author's name.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

B. W. PALMER, A. M., M. D., Editor.

—Published By—

GEO. S. DAVIS, Medical Publisher, Box 470.

DETROIT, MICH., SEPT. 10, 1892.

Editorial.

THE PRESENT STATUS AND PREVENTION OF CHOLERA.

As we go to press, the latest reports indicate a decrease in the cases of cholera reported from the plague centres abroad. In Berlin the epidemic is stayed and no new cases are occurring. Both in Berlin and Paris many of the cases are stated to be of a mild character and are designated as cholerine.

With the precautions that are being taken in this country, there does not seem to be imminent danger of the extensive spread of cholera here. Immigration from infected ports will be stopped or controlled; all vessels, as well as immigrants on trains, under suspicion will be quarantined; and cholera cases when discovered will be isolated and disinfection thoroughly carried out.

These facts, however, do not militate against the necessity of enforcing the strictest sanitary precautions. Water and milk should be boiled, unripe fruit tabooed, the skin and emunctory organs carefully looked after.

There is a national law which authorizes the Secretary of the Treasury to take such steps as may be necessary to prevent the spread of cholera, yellow fever, and smallpox, and under this law the Government may wholly interdict immigration or take any measures deemed necessary to stamp out these diseases.

According to Fraenkel the comma bacillus is killed by temperatures above 120° F. It also perishes quickly when dried. It would not seem impossible, therefore, to restrict the extension of cholera in this country. Isolation, general sanitary precautions, disinfection of clothing and discharges, are the means to be employed.

In view of the inadequacy of the quarantine station at Grosse Isle, Samuel P. Duffield, M.D., Health Officer of Detroit, with the authority of the Government, will inaugurate a twenty-day quarantine at Detroit. A quarantine hospital will be established, and two boats may be used, one for quarantining suspects for examination, and the other for isolating cholera patients. Inspection of both boats and trains will be made, and the clothing and baggage of all immigrants be disinfected. The danger from immigration from Canada has been to some degree obviated by the Canadian railroads agreeing to refuse to carry immigrants from infected ports.

Among preventive measures suggested, Messrs. Brieges and Wassermann publish in the Deutsch. Med. Wochenschrift the results of their investigation of protective inoculation of animals against cholera.

Cholera bacilli were grown for twenty-four hours upon a watery extract of calf's thymus. The culture medium was then kept at 65° C. for fifteen minutes or at 80° C. for ten minutes, and subsequently placed in the ice-chest for twenty-four hours. Intraperitoneal injections of this fluid were made upon guinea-pigs, which thereafter proved immune to cholera bacilli of such virulence as to produce rapid death in the control animals. The minimal dose necessary to protect a guinea-pig of from 300 to 400 grammes weight against a fatal dose of cholera culture was 2 c.c. (1 c.c. injected on two successive days). Precisely similar results were obtained with ordinary bouillon cultures of cholera bacilli which had been kept at 65° C. for fifteen minutes. In this case also 2 c.c. was the minimal dose necessary to confer protection, which was still complete after the lapse of two months. A more detailed communication is promised.

Dr. Christmas has also investigated, in the Pasteur Institute in Paris, the effects of acid drinking-water in killing the cholera and the typhus bacillus.

0.6 citric acid in a liter of water kills cholera bacilli in fifteen minutes.

0.9 citric acid in a liter of water kills the typhus bacillus.

One gramme of citric acid dissolved in a liter of water makes it absolutely safe to drink. This solution has an agreeable taste, and could be kept in large quantities, at very little expense, ready for drinking purposes in factories and other establishments where many people are obliged to live together during ten hours each day, and where the drinking of boiled water in the form of coffee or tea is out of the question.

[Probably tartaric acid or liquid acid phosphates would serve the same purpose.]

Our readers are doubtless aware that any alkalinity in drinking-water makes it dangerous.

THE LIVER IN LITERATURE.

Beckles Wilson, in the September number of Food, writes entertainingly on this subject.

The relation of food to physical and temperamental peculiarities is hardly a new idea. Neither can we claim for these peculiarities, in their relation to the careers of noted persons, strict novelty, for they have long been expatiated upon by ingenious essayists. We have been told by them that a diminutive stature, a club-foot, a pitted countenance, a crooked backbone, have figured in the alteration of whole epochs; and it would be hard to gainsay the opinions of these writers, who seem to have established their hypothesis on a pretty firm basis. But this relation here shall only serve as a text.

If statesmen and emperors have been so affected, what must we then say of poets and authors of genius, who proverbially possess a temperament more readily a prey to bodily indisposition and uncongenial surroundings than any other class of men on earth?

He who chooses may learn by consulting Darwin that the "natural bent of the perfect mind is towards optimism." But whence came all the printed cynicism, misanthropy, and despair which have deluged this green earth of ours for some centuries, if not from "perfect minds?" What, may we ask, is a perfect mind? Surely the man with the head-piece of a Swift, a Johnson, a Byron, or a Carlyle on his shoulders need not go any farther than his own house in search of brains. What are we to believe, then? Why, that the minds of these men were originally the stamping ground of optimism—that as children they laughed, shouted, and gamboled just like other children—until, with pitiless, insidious current, the bile from a dis-

ordered liver began to permeate their being and wreak a fateful and fatal destiny upon the gyrations of their pens.

This is no theory. This is something more than an ingenious deduction. We have the testimony of Mrs. Carlyle that her husband, great writer though he is held, would have been a much greater had he not been the perpetual victim of dyspepsia. Now, it is easy to mistake dyspepsia for—what shall we call it?—an *affaire du foie;* but even granting that the malady was properly located in Carlyle's case, does not this prove unanswerable logic? The relation of the liver to the world's literature is not as yet properly understood, and we doubt very much if, until the present moment, any attempt has ever been made to define it. Who that takes up the writings of Addison, Prior, Steele, and Gay, cannot, by a minute study and careful dissection and comparison of the several portions of the works of each of these writers, satisfy himself that the differentiations of literary atmosphere, of *motif* of treatment, are the result of mood? And what is mood, ordinarily speaking, if not the direct offspring of the liver? Again, authors are not a physically robust sect, as a rule—certainly not an athletic sect—yet they are often gourmands. Now, the laws of nature and hygiene demand a certain amount of bodily exercise in order to maintain a perfectly normal mental and moral equilibrium; and there are no more notorious violators of these laws than poets, novelists, and scribblers.

It is difficult indeed to refrain from some startling assumptions here. Who, for example, shall say that Shakspeare was not suffering from an inactive spleen when he wrote "Cymbeline" or "Titus Andronicus," or that that glorious but gloomy masterpiece "Hamlet" itself was not the result of undisciplined bile? Swift was a pitiful victim of his liver; it is traceable in nearly the whole of his work, and the really healthy man is scarcely visible save in small portions of his private correspondence. The second part of "Gulliver's Travels" is a glaring instance in point.

But perhaps it would be difficult to pick out off-hand from the world's literature a more unfortunate example of the liver's malefic influence than Boswell's idol, Dr. Johnson. No mortal can even guess at the quality of those gems which might have enriched the library of posterity had the worthy old Doctor's biliary organ properly performed its assigned functions. He himself wrote: "I cannot bring myself to work. A sluggish feeling possesses me, and I spend half my time in a kind of stupor." And yet, sad to relate, the erudite author of "Rasselas" never once forgot his devotion to Mrs. Thrale's "gigantic pork-and-veal pies stuffed with plums," or to his muchly-steeped bohea, quarts of which he was accustomed to consume daily.

Lord Byron, it is well known, was the slave to his liver to such an extent that once he actually thought it obligatory upon him to exist on bread and champagne for a week. "The Dream" and "Manfred" were, on his own authority, composed while suffering from virulent attacks of the "blues." And in this connection a stanza which he appended to the second canto of "Don Juan" occurs to us, which we quote merely to show the noble poet's own opinion of his liver:

> The liver is the lazaret of bile,
> And very rarely executes its function;
> For the first passion stays there such a while
> That all the rest creep in and form a junction,
> Like knots of vipers on a dung-hill's soil—
> Rage, fear, hate, jealousy, revenge, compunction—
> So that mischiefs spring up from this entrail
> Like earthquakes from the hidden fire call'd "central."

The liver has invaded the literature of France to an even greater extent than that of England, especially in works of fiction. In America, unless some antidote be speedily taken, it will have passed all bounds. The lettered *gens atrabilaires* in the United States, headed by Mr. Howells, Mr. James, Mr. Fawcett, and Mr. Saltus, is indeed legion.

Then those in the United Kingdom have their Oscar Wilde, their Henry Arthur Jones, their—but why go on? How easy it is to single out these men from the writers of good moral cheer whose breasts never harbor a single feeling or impulse that is not clean, optimistic, healthy, and whose livers are encompassed about by a sturdy flow of blood, expurgatorial at once both of bile and of pessimism.

We have, it will be seen, merely glanced at our theme. But if we were asked what, in our opinion, is needed to stem the tide of literary decay, we should strongly recommend, not a college of poetry and fiction, but a pair of dumb-bells. Literary normalism may be inculcated through the agency of such a college of literature, but in individual instances we are hearty believers in the efficacy of a daily ten-mile walk and a nicer discrimination in diet.

THE INFLUENCE OF THE MIND ON THE BODY.

In an article entitled "Psycho-Therapeutics," which Wm. Dale, M.D., of London, contributes to the London Lancet, he presents many interesting suggestions.

Fear, anger, revenge, grief, love, hope, joy, friendship, may all affect physical condition.

As illustrative of the belief in this theory, so early a writer as Churchill says :

The safest way to health, say what you will,
Is, never to suppose we shall be ill;
Most of the ills that we poor mortals know,
From doctors and imagination flow.

The efficacy of strong emotion in producing, or in helping to produce, such conditions as diabetes, chorea, and epilepsy, is well recognized, and, we venture to say, undoubted; but it is always difficult to estimate correctly the influence of such accidents, or to say how much may be due to them and how much to an underlying instability which such a disturbance merely makes evident. That a depressed physical and mental condition also renders the bodily organs more susceptible to the influence of some poison, such as that of the specific fevers, is well recognized; and when the inseparable connection between mind and body, and the profound alterations which fear or joy bring about in (for example) secretory organs, are taken into account, it is not surprising that violent emotion should, as it were, open the gate to allow the admission of sundry toxic influences.

It is an interesting question how much of the general—but by no means invariable—immunity which medical men enjoy from infectious disease is due to the calmness and unconcern with which they regard such diseases in relation to themselves. They forget to be afraid, and so they are clothed with an invisible and often an invulnerable cloak.

It appears, then, that Faith and Hope are the two great principles which the physician must encourage or seek to evoke in his patient. The diseases to which man is liable may be looked upon as so many enemies which lay siege to the citadel of his life, and often he is so fiercely assailed by them that he finds no help or defense in himself; and it is then that the physician, coming to his rescue with the powerful allies Faith and Hope, may perchance create within him a courage which will enable him to make, at least, a brave stand against his foes.

TREATMENT OF HAY FEVER AND HAY ASTHMA.

The fact that many radical cures of this malady have been effected by local treatment of the nasal passages would seem to indicate that pathological conditions of the nasal passages are frequently the cause of the symptoms manifested.

The most rational method of constitutional treatment is one which elevates the tone and increases the normal resistance of the pulmonary nerves. Tonics such as iron and arsenic, and the regulation of the bowels for a few weeks before the period of onset, will do much to lessen the severity of the attack.

Local treatment may be radical or palliative. Every case should be carefully examined for abnormalities of the nasal passages. Hyperplasia of the mucosæ, and especially thickening over the turbinated bones, should be reduced by the galvano-cautery. A deviated septum should be straightened, and bony spiculæ removed.

For palliative measures, various inhalations are used. Perhaps none have proved more efficient than peroxide of hydrogen, though eucalyptus, creasote, and camphor are sometimes of service.

In the paroxysms of hay asthma a combination of the fluid extracts of quebracho, Grindelia robusta, and lobelia, given in hot water and brandy, will often afford relief.

Book Notices.

AN AMERICAN TEXT BOOK OF SURGERY FOR PRACTITIONERS AND STUDENTS. By Charles H. Burnett, M.D., Phineas S. Conner, M.D., Frederick S. Dennis, M.D., William W. Keen, M.D., Charles B. Nancrede, M.D., Roswell Park, M.D., Lewis S. Pilcher, M.D., Nicholas Senn, M.D., Francis J. Shepherd, M.D., Lewis A. Stimson, M.D., William Thomson, M.D., J. Collins Warren, M.D., and J. William White, M.D. Edited by William W. Keen, M.D., LL.D., and J. William White, M.D., Ph.D. Profusely illustrated. Pages 1209. Price: Cloth, $7.00; sheep, $8.00; half Russia, $9.00. Published by W. B. Saunders, 913 Walnut St., Philadelphia, Pa. 1892.

The time is an opportune one for recording the concensus of opinion of representative American teachers and surgical practitioners as to the modern status of surgical practice.

Surgery is a progressive art, and the authors are pre-eminently well fitted to reflect the sentiment and belief of the most intelligent and advanced surgeons of modern times.

One attractive feature of the book is that, while the entire work has been submitted, in proof sheets, to all of the authors for mutual critical revision, and thus may be said to express in the main the opinion of all, each author has been permitted to express his minor differences of opinion from his *confrères*—which gives the book a distinctive individuality and charm.

There are 27 plates, many of them original, several of them colored, and, in addition to these, illustrations of instruments and pathological conditions which clearly and pertinently elucidate the lessons of the text.

The book is a most comprehensive and valuable treatise on Surgery, and deserves the reading of all in the profession who appreciate the inspiration afforded by contact with the minds of these brilliant stars of the surgical firmament. We predict for it a wide reading.

The work is sold by subscription only.

CONTENTS OF NEW ENGLAND MAGAZINE FOR SEPTEMBER.

"On the Shores of Buzzard's Bay," Edwin Fiske Kimball; "One of a Thousand," Eben E. Rexford; "Old Deerfield," Mary E. Allen; "An Improved Highway System," E. P. Powell; "The North Pole," Charles M. Skinner; "An August Drive," James Buckham; "What is Nationalism?" Rabbi Solomon Schindler; "Requiem Æternam," Arthur L. Salmon; "A Lover's Fancy," Harry Romaine; "Rhode Island," E. Benjamin Andrews; "Mrs Rex's Brahmin," Kate Gannett Wells; "Sorrow Transformed," Elizabeth C. Cardozo; "Bird Traits," Frank Bolles; "An Old New Hampshire Muster," Horatio J. Perry; "Patience," Edward W. Barnard; "Signal Service," Elizabeth and Anne Gleason; "A Plea for the German Element in America," W. L. Sheldon; "The Tendencies of Othello Perkins," Helen Campbell; "Profit-Sharing in the United States," Nicholas Paine Gilman; "The End of Childhood," Grace MacGowan Cooke; "The Author and Society," Walter Blackburn Harte; Editor's Table, Edwin D. Mead; Omnibus.

The contents indicate that this popular young magazine is skilfully edited. The number is exceptionally well balanced; it contains matter for all tastes, and manages to combine solid reading with light as few of its competitors do.

A TEXT-BOOK OF THE PRINCIPLES AND PRACTICE OF MEDICINE. For the use of Students and Practitioners. By Henry M. Lyman, M.D., Professor of the Principles and Practice of Medicine in Rush Medical College, Chicago. In one very handsome octavo volume of 926 pages, with 170 illustrations. Cloth, $4.75; leather, $5.75. Philadelphia: Lea Brothers & Co. 1892.

Prof. Lyman is widely known as a teacher and author, and in this volume has endeavored to present, in addition to the results of his own observation and experience, the views expressed in the last editions of Ziegler, Hallopeau, Eichhorst, Cornil, and Babes, and all of the collaborators of the Traité de Médecine.

The arrangement of the book is rather novel. After devoting part 1 to preliminary considerations, the author discusses, in part 2, parasitic and infectious diseases; in part 3, diseases of the alimentary canal; part 4, diseases of the liver, pancreas, peritoneum and spleen; part 5, diseases of the organs of respiration; part 6, diseases of the organs of circulation; part 7, diseases of the blood; part

8, diseases of nutrition; part 9, diseases of the kidneys and genito-urinary organs; part 10, diseases of the nervous system; part 11, diseases of the spinal cord and membranes; part 12, diseases of the sympathetic nerves and muscles; part 13, diseases of the brain and cerebral membranes.

Medicinal agents and doses that are advised are usually those which are the most generally applicable in hospital practice and in treating the majority of patients.

Altogether the Doctor has covered a very large field with as much brevity as practicable, stating as far as possible facts not permitting controversy.

CONTENTS OF SCRIBNER'S MAGAZINE FOR SEPTEMBER.

"The Emperor of Russia Blessing the Waters of the Nevá at Epiphany." Frontispiece. Drawn by Ilya Efimovitch Répin; engraved by Frank French.

"The Last of the Buffalo." By George Bird Grinnell. Drawings by Ernest E. Thompson and O. H. Bacher; engraving by C. I. Butler.

"The Tilden Trust Library: What Shall it Be?" By John Bigelow. Drawings by Ernest Flagg and V. Pérard.

"Sure." By Anna C. Brackett.

"The Névsky Prospékt." By Isabel F. Hapgood. [The sixth article in the series "Great Streets of the World."] Drawings by Ilya Efimovitch Répin; engraving by F. Leblanc and H. W. Peckwell.

"A Case in Point." By George A. Hibbard.

"French Art—I. Classical Painting." By W. C. Brownell. With reproductions from works of Lesueur, Claude, Chardin, and Watteau.

"Stories of a Western Town—II. The Face of Failure." By Octave Thanet. Illustrated by A. B. Frost.

"Insomnia." By Edith M. Thomas.

"The Indian who is Not Poor." By C. F. Lummis. Drawings (from photographs) by Irving R. Wiles and V. Pérard; engraving by C. I. Butler.

"Her Last Word." By Lizette Woodworth Reese.

"The Education of the Blind." By Mrs. Frederic R. Jones. Illustrated.

"Death at Daybreak." By Anne Reeve Aldrich.

"Historic Moments: The Attainment of the Highest North." By D. L. Brainard, Lieutenant U. S. Army.

The Point of View: "The Critical Value of Popularity"—"The Gallery in Politics"—"The Artist as a Dogmatist"—"Residence in the District"—"American Treatment of Women."

DARWIN AND AFTER DARWIN: An Exposition of the Darwinian Theory and a Discussion of Post-Darwinian Questions. By George John Romanes, M.A., LL.D., F.R.S. The Open Court Publishing Co., Chicago. Pages 460. 1892.

The author proposes to publish three separate works; the first, to deal with the purely historical side of biological science, will be allowed to stand over for some time. The second is the volume now brought out, and is devoted to the general theory of organic evolution. The third is expected to be out in the autumn, and will discuss "Post-Darwinian Questions." The present volume very thoroughly and clearly presents the Darwinian Theory. It contains one hundred and twenty-five illustrations elucidating the text, and is handsomely printed and bound. Those interested in this subject will welcome this scholarly presentation of Darwin's work.

A MANUAL OF CHEMISTRY, INORGANIC AND ORGANIC, WITH AN INTRODUCTION TO THE STUDY OF CHEMISTRY. By Arthur P. Luff, M.D., B.Sc. (Lond.), M. R. C. P. Illustrated with 36 engravings. Published by Lea Brothers & Co., Philadelphia.

In view of the services rendered therapeutics by chemistry, it behooves the modern physician to keep himself informed of progress in chemical science.

This book has been written to bring together those portions of chemical science that directly or indirectly bear on the practice of medicine. Its contents will make the art of medicine more intelligible to the student, and afford him that basis of knowledge which is essential to symmetrical development.

It does not purport to be a complete and voluminous work on organic chemistry, but merely one adapted for conveying to the

student and medical man facts concerning chemistry which will prove available to him in practice.

THE ESSENTIALS OF HISTOLOGY, DESCRIPTIVE AND PRACTICAL, FOR THE USE OF STUDENTS. By E. A. Schafer, F.R.S., Jodrell Professor of Physiology in University College, London; Editor of the histological portion of Quain's "Anatomy." Third Edition, revised and enlarged. Illustrated by more than 300 figures, many of which are new. Published by Lea Brothers & Co., Philadelphia.

No doctor to-day should be without a working knowledge of histology comprising all the essential facts of the science. This book is intended to afford this information. It is divided into 45 lessons, and will be found most helpful to the student or practitioner who desires to take an elementary course in histology.

TALES FROM TOWN TOPICS—No. 5. Published by Town Topics Co., 21 West Twenty-third St., New York. Price, 50 cents.

The latest quarterly volume issued by the proprietors of New York's fashionable society journal has just appeared, and is equally as captivating in regard to matter as its predecessors. There is apparently no end to the good things at the disposal of this journal; its stock appears inexhaustible, and there is not a dull page in the book. Clever, witty, healthful in tone and sentiment, these tales, sketches, and verses are nuggets of true gold.

INDIGESTION: A Manual of the Diagnosis and Modern Treatment of the Different Varieties of Dyspepsia. By George Herschell, M. D., London. Published by Baillière, Tindall & Cox, London, and by G. P. Putnam's Sons, New York.

Indigestion has been aptly defined to be "the conscience of every bad stomach," and woe to him who cannot exorcise this demon which troubles his best ease as the Furies once troubled the sleep of Orestes.

Dr. Herschell has concisely, methodically, and happily given in this tastefully printed book of 200 pages a *résumé* of the more important points in the diagnosis and treatment of indigestion. It is fully up to date and presents the best modern views of the treatment of this malady.

Notes and News.

The Ætiology of Dysentery.—

Ogata (Centralb. f. Bakt., March 9, 1892) gives the results of his investigations into the causation of the epidemic dysentery occurring in summer in Japan. The stools of patients suffering from the disease, the mucous membrane of the large intestine, and the floors of ulcers situated there, were found to contain, amongst other organisms, fine, short bacilli in large numbers. They were stained by Gram's method. In hardened sections these bacilli are seen to be about one-fourth the length of tubercle bacilli; in breadth they are about equal to the latter. Gelatin is liquefied by them. In the hanging-drop the bacilli are seen for the most part in pairs, like diplococci. They move actively. Colonies develop on plates in twenty-four hours at the temperature of the room, and appear as white points to the naked eye; slightly magnified they are seen to be round, homogeneous, and of a greenish yellow color, sharply defined. These bacilli are pathogenic for mice, guinea-pigs, and cats. When inoculated subcutaneously, given in food, or introduced in enemata, they produce in guinea-pigs and cats slimy and bloody evacuations, ulcers in the large intestine, and swelling of the mesenteric glands. It is highly probable that these organisms are the cause of epidemic dysentery in Japan, a disease which proves fatal in a large proportion of cases.

The Keeley Cure Abroad.—

The Keeley cure received a black eye in London, where its promotors endeavored to establish it. They analyzed it, and naturally found no bichloride or chloride of gold, but only: Water, 61.31 per cent.; sugar, 6 per cent.; a small quantity of mineral salts, principally lime, probably from herbs; and 27.55 per cent. of pure alcohol. The verdict of the Society for the Study of Inebriety was: That any so-called "cures" for inebriety, the composition of which is not disclosed, are unfit to be commended by honorable members of the medical profession, who are bound to place the full details of their treatment before their professional colleagues

—a requirement as essential in the interest of the public as it is consonant with the disinterested practice of scientific therapeutics. They condemn unreservedly the prescription of such an intoxicating preparation to an inebriate.

Is it not time reputable physicians of this country united to exhibit Keeley in his true light, and endeavor to suppress his wholesale robbery, and criminal practice?

The Bacillus of Soft Chancre.—

About three years ago La Riforma Medica published a description by Dr. A. Ducrey of a microbe that he had found in soft chancres, and that he regarded as the cause of that disease. The bacillus was short and thick, having rounded extremlties, often with a lateral groove, and was either isolated or in chains.

In the June number of the Annales de Dermatologie et de Syphiligraphie Dr. Pusey reports the discovery by Dr. Unna of a bacillus that seems to be the pathogenic agent of the soft chancre. It occurs in the form of chains of two or more bacilli, and is most numerous in ulcerated tissue, though it is found between the cells of the environing tissue. It may be isolated in microscopic preparations by coloration with methylene blue, and then decolorized with styrone or ether and diluted glycerin.

In a recent number of the British Medical Journal there is a note stating that Quinquaud has confirmed Unna's discovery.—*New York Medical Journal.*

New Method of Examining Specimens of Blood.—

A method of making permanent preparations of blood has recently been described by Dr. R. Muir, in the Journal of Anatomy, which promises to be of great use in clinical investigation. The specimens thus prepared can be preserved indefinitely, and compared with others obtained from the same patient at subsequent periods. The method is quite simple. The films are prepared on cover-glasses in the usual way, and, before they have time to dry, are placed in a saturated aqueous solution of corrosive sublimate (to which a little common salt may be added) for half an hour. The corrosive sublimate is then washed away with a ¾-per-cent. solution of common salt, and the film is further hardened by a few minutes' immersion in methylated spirit, and then absolute alcohol. The specimens can then be stained by the ordinary reagents, very good results being given by double staining with eosin and hæmatoxylin, the red corpuscles being stained by the eosin, while the nuclei of the leucocytes are prominently revealed by the hæmatoxylin.—*The Lancet*, May 28, 1892.

Vaccination Against Cholera.—

Dr. Hafkin claims to have elaborated a vaccine capable of conferring immunity against this disease in animals. He has also vaccinated a number of his medical colleagues, and reports the results in the Bulletin Médical of July 31, 1892. In each case he noted fever, malaise, and loss of appetite, for a few days succeeding the injection. He did not carry his experiments so far as to feed his friends upon comma bacilli in order to prove protective the efficacy of his vaccine. He says, however, that this has been abundantly demonstrated in the case of animals, and his experiments upon man have shown that there is not the slightest danger to be apprehended from the inoculations. But Ferrán will doubtless dispute Hafkin's title to priority in cholera vaccinations.—*Medical Record.*

Tri-State Medical Society of Alabama, Georgia, and Tennessee.—

This Society meets at Chattanooga, October 25, 26, and 27, 1892. The committee has secured a one-and-one-third rate from the railroads, on the certificate plan. There will be a large number of exhibits at the meeting, and the session promises to be one of unusual interest. The present membership of the Society is 212, and it includes some of the best men of the profession from a number of States. All will be welcome to the meetings of the Society, but the membership is limited to graduates of regular medical colleges residing in the United States.

The Bacillus of Eclampsia.—

Dr. Gerdes, in the Pathological Department of the University at Halle, has found a bacillus in the liver, lungs, kidneys, and

blood of a severe case of eclampsia. Cultures of this bacillus, when inoculated in rats and mice, cause shallow respiration, coma, subnormal temperature, and in the mice convulsions. It is very virulent, causing death in a short time. In guinea-pigs intravenous injections caused convulsions, intraperitoneal did not. The bacilli were found often in the form of bacillary emboli, the starting-point of which was probably a focus in the placenta.—*Boston Medical and Surgical Journal*, June 2, 1892.

The Admission of Women into Medical Societies.—

This subject received unusual attention at the meeting of the British Medical Association held at Nottingham last month. The voice of all who spoke was in favor of admitting all duly registered female practitioners into the Association. When the question was submitted to the Association it was carried very nearly unanimously, only four members voting against such admission. The Association's decision has been received by the press generally throughout the kingdom with expressions of warm approval and congratulation. It is presumed that our own American Medical Association will take action on this subject at some meeting in the near future.—*Doctor's Weekly.*

Incomes of Berlin Physicians.—

In Berlin there are 1,615 physicians and 132 dentists, a total of 1,747. Of these there are 855 who do not have an income of 3,000 marks, or $750, per annum. There are 892 who do not depend on their practice for a livelihood; 150 have much less than 3,000 marks; 250 physicians have an income over 8,000 marks, and 170 over 10,000 marks The number of physicians who get rich is very small indeed, while the number in debt is extremely large.

The Death of Dr. Thomas F. Wood, of Wilmington, North Carolina.—

Dr. Wood died of heart disease, on the 22d ult. He was well known throughout the South as editor of the North Carolina Medical Journal and as secretary of the State Board of Health. He had rendered valuable services to the medical profession and to sanitary science.

Therapeutic Brevities.

Treatment of Alopecia Areata.—Drs. Morrow and Bulkley, in the Transactions of the Dermatological Association, give the following formulas:

Dr. Morrow says: The hairs around the border of the patches are closely clipped, and, if they yield readily, are to be extracted with forceps. In recent cases chrysarobin 8 to 10 per cent., and salicylic acid 2 to 5 per cent., is recommended, in liq. guttapercha or lard, applied every three or four days in sufficient strength to maintain a moderate dermatitis. Equal parts of acetic acid and chloroform, is also well spoken of; also, chloral 5 grammes, officinal ether 25 grammes, and acetic acid (crystal) 1 to 5 grammes, repeated two or three times a week. In the intervals a stimulating oil once a day —as oil of eucalyptus and oil of turpentine, each half an ounce, crude petroleum 1 ounce, alcohol 1 ounce—together with massage, is employed. Sulphur, resorcin, and salt-water frictions are also useful.

Dr. Bulkley calls attention to a method of treatment that he has for a number of years employed satisfactorily, which consists in the thorough application of carbolic acid, 95 per cent. strength, rubbed into the patches one or more times. It is a little painful at first, but the second application is not often complained of. It should not be used on more than two or three square inches at one sitting, several days being allowed to elapse before another touching.

Iodine in Hæmorrhoids.—N. Ivanoff (Vratch, No. 4, 1892) successfully treats prolapsed and inflamed hæmorrhoids by gently painting the parts with tincture of iodine. He records a severe case in a factory worker with very painful piles, the largest of which was as big as a walnut. The patient suffered great pain both in walking and in sitting. All ordinary medical measures having failed, and the man declining surgical interference, the author applied the tincture (once daily). The next day the mass had decreased to half its former size; after a second and last application, "only hardly perceptible traces remained;" on the third day the man left, declaring himself perfectly well. Preismann, of Odessa (Wiener Medicin. Presse, May 31, 1891) emphatically recommends the application of a compress, or a piece of cotton wool, soaked in a glycerin solution of iodine and iodide of potassium. It is advisable to commence with a weak solution (2 grammes of the iodide and 0.2 of iodine to 35.0 glycerin),

gradually increasing the strength up to 5.0 of iodide and 1.0 of iodine to 35.0 glycerin.

Itching in Scarlet Fevers.—This is not always agreeable, but it has never been supposed to be a favorable sign, yet St. Phillippe (Rev. Mens. des Mal. de Lienf., February, 1890) presents the following conclusions:

(1) Scarlatina is a disease which is often accompanied by itching. (2) This variety usually has a favorable prognosis. (3) The itching is due to the fact that the eruption is not intense and the cutaneous lesions not very profound.

A good application for the relief of this itching is the following:

℞ Campho-phenique, ℥ ss.
Albolene unguent, ℥ jss.

M. Sig.: Apply night and morning.

Another advantage is that it is in the direction of personal disinfection.—*Archives of Pædiatrics.*

On the Treatment of Croup.—Pilière read a paper on this subject before the Paris Academy of Medicine. After the year 1890, said the author, he treated with the greatest possible success all diphtheritic forms of the disease in the following manner:

He washed out the pharynx morning and evening with a cotton brush dipped into a solution of nitrate of silver of 1:30 strength, detaching as much as possible of the false membrane. After each washing he atomized a solution of corrosive sublimate into the throat, using in cases of children above two years old 1:500 solution, and below that age 1:1000. These pulverizations of the corrosive solution have been repeated every two hours during the day and every three hours during the night. Never in his hands has any accident of mercurial poisoning been constant or fatal.—*Le Scalpel*, June, 1892.

Induction of Premature Labor by Glycerin Injections.—Pelzer (Centralbl. f. Gynäk., No. 2, 1892) gives a very satisfactory account of his experience with this method. He employs chemically pure sterilized glycerin. A hundred cubic centimeters are thrown up between the membranes and the uterine wall. Full precautions are taken, not only against sepsis, but also against the entrance of air into the uterine cavity. In a short time regular pains set in. The membranes present well, and labor is usually easy. In two cases where labor was induced on account of contracted pelvis, the pains set in, in the first case, within half an hour; in the second, after an hour. Glycerin injections are, in Pelzer's experience, valuable not only for the induction of premature labor, but also for accelerating delivery at term. In uterine atony they prove very efficacious.

Treatment of Cholera.—The following *résumé* is given by the Therapeutic Review, of Manchester, England: There appears to be an impending attack of this dire and typically infective disease, judging from the reports in the lay press as regards its European progress. Little has been discovered as to means of specific treatment, the comma bacillus notwithstanding; but, from the symptoms and condition of those attacked, it may be assumed that any medicines that will relieve pain and obviate the thickening of the blood will assist towards recovery. Recently a number of observations on the importance of calcium salts in the process of blood coagulation have been published; and such medicines—for example, sodium phosphate and potassium oxalate—as would remove calcium combinations, should have the desired effect on absorption.

Treatment of Apparent Deaths from Drowning.—Laborde (Rev. Gén. de Méd., July 20, 1892) reports that in two cases of submersion in which the patients seemed to be dead he used the following procedure, which he is in the habit of employing on the animals in his laboratory. It consists in seizing the tongue, pulling it out of the mouth, and making rhythmical traction on it. This is followed in the first place by reflex hiccough, then by spontaneous contractions of the diaphragm, and finally by re-establishment of circulation and respiration. As an adjuvant to this procedure, the application to the epigastrium of cloths soaked in very hot water, even at the risk of burning the skin, is found useful.

Atropine in Hæmoptysis.—Dr. Hausmann prescribes subcutaneous injections of atropine as a last resort in cases of serious hæmoptysis. He cites three cases in which this remedy produced excellent results. The first was that of a patient who had serious hæmoptysis twelve times in six days; three milligrammes of sulphate of atropine were injected; there was no recurrence of hæmoptysis. The same result was obtained in the second patient, in whose case the administra

tion of turpentine preparations and injections of ergotin had produced no improvement. In the third case a patient suffering from repeated hæmoptysis was cured by two subcutaneous injections of three milligrammes of sulphate of atropine.—*British Medical Journal.*

Boro-borax: A New Boric Preparation.—This preparation, discovered by M. Jaenicke, results from a mixture of equal parts of borax and boric acid in boiling water.

The antiseptic and therapeutic properties of this mixture resemble those of boric acid, but it has a neutral reaction and is much more soluble. At ordinary temperature 16 parts of boro-borax dissolve in 100 of water; at 100° F., 30 parts dissolve in 100 of water; at boiling temperature, water dissolves 70 per cent. of the substance.

Boro-borax is readily made by mixing together in boiling water equal parts of borax and boric acid. On cooling, the greater part of the substance crystallizes out.

Treatment of Baldness.—One of the best combinations in the treatment of baldness consists of:

℞ Pilocarpinæ hydrochloratis, gr. v.
Otto de rosæ, ♏viij.
Olei rosmarini, f ʒ iv.
Linimenti cantharidis, f ʒ iv.
Glycerini puri, f ʒ j.
Olei amygdalæ dulcis, f ʒ ij.
Spiritus camphoræ, f ʒ iij.

M. S.: To be rubbed well into the scalp, night and morning.

—Whitla, *Therapeutic Review.*

Salol in Cholera.—Every day brings new remedies against cholera. In the Deutsche Medizinische Wochenschrift Dr. W. Loewenthal recommends the use of salol. He has made many experiments on animals, and lately the remedy has been tried in a cholera epidemic on the Phillippine Islands, where, as Dr. Loewenthal alleges, the results have been surprisingly good; of 53 cases, only 3 ended fatally.

The Use of Alkalies in Pruritus.—In four cases of rebellious pruritus I found that the urine was loaded with uric acid and urates. I prescribed alkalies, such as bicarbonate of soda, carbonate of lithium, alkaline waters, etc., with excellent results and finally complete cures.—Dr. Lange in *Times and Register.*

Medical Progress.

Treatment of Puerperal Fever.—Dr. Wm. R. Pryor, Lecturer on Gynæcology at the New York Polyclinic, contributes to the current number of the International Journal of Surgery an article on Puerperal Fever. Of treatment he says:

If the stomach be in good condition, I give quinine sulphate 5 grains, q. l. h. ad four doses, to eliminate any malarial element which so often clouds our diagnosis. If the stomach be irritable, 30 grains may be given in tartaric acid solution by the rectum. I do not wait for the drug to act, but at once begin the local attack on the disease. After cleansing the genitalia, my hands, and the catheter, I introduce into the uterus a linen catheter, No. 15, and wash out the uterus with quarts of a solution of bichloride of mercury, 1:4000, at a temperature of 110° F. After this I always wash away the mercury solution with boiled water to which has been added table salt, a heaping teaspoonful to the quart of water. If the case has been seen within a few hours after the onset of symptoms, this one douche will often suffice. But if the temperature does not fall in two hours, I advise a continuous irrigation. This is accomplished by introducing into the uterus a catheter, and allowing to flow through it continuously a warm saturated solution of boracic acid or a boiled salt solution. The catheter should first be boiled, and is readily introduced with the finger as a guide, the patient being on her back. The catheter must be fastened to the pubes by means of rubber plaster. This continuous irrigation can be arranged by the physician, and left in charge of any intelligent person to keep the bucket full. The syphon action is employed, the bucket holding the solution being above the bed. Double-current catheters are not necessary, as the cervical canal is always well open. Many patients either die or have a complicated convalescence because the washing is done every few hours. The irrigation should be kept up for some hours after the temperature falls, and should be followed by occasional intra-uterine douches of bichloride 1:5000 or even 1:10,000, for some days, or until shreds of tissue cease to appear in the washings. After this a pencil of iodoform, 20 grains, may be introduced into the uterus, and the patient let alone. There is absolutely no risk of water entering the tubes. Painting the endometrium with carbolic acid, swabbing it with cotton, and occasional washings, are to be condemned as insufficient and time-wasting.

If the case be seen late, or if the continuous irrigation persisted in for twelve hours fails to subdue the symptoms, what is to be done? From so many quarters has laparotomy been advocated for the relief of puerperal fever that I must say something against it, although I intended to discuss in this paper only those measures which have given me the best results. So trivial a factor is infection of the tubes and ovaries in puerperal fever that it is rash and almost criminal to perform a section for their removal to cure puerperal sepsis. All women who have puerperal fever do not die—only about a quarter. That twenty-five per cent. will die anyway if salpingo-oöphorectomy be performed. And added to the common mortality of the disease must be that of the operation. It is my belief that laparotomy for the removal of the adnexa during puerperal fever has a mortality of at least forty-five per cent. And when there exists general purulent peritonitis post-partum, I believe the rate of mortality is one hundred per cent.

Laparotomy done here removes organs but little diseased and not factors in the causation of the trouble. It leaves behind the rotten septic uterus. It would be about as rational to lance an axillary abscess to relieve a phlegmon of the hand, or open a bubo and expect that to check the causative gonorrhœa. If a man can see pelvic inflammations only in the light of their results, and is irresistibly impelled to do a laparotomy in these cases of puerperal fever, he should remove the whole organ.

In a number of articles, and before the New York Academy of Medicine, I have advocated another operation for the relief of these cases. If the continuous irrigation fails, or if the case be seen after the symptoms have persisted for a day, no matter how grave the symptoms, I curette the uterus and pack it with some absorbent dressing. The infection is too deep-seated to be touched by the washings or applications, and the organ must be treated as any other septic, discharging, sloughing cavity. The system with healthy emunctories can eliminate a profound degree of infection, provided the supply be cut short before the viscera become involved. Purgation to a limited extent by salines is demanded. Diuresis is always present if the kidneys be normal, and is a great help to us. Therefore, if we can prevent the uterus acting as a further source of sepsis, we will limit the lesions following the infection. Curetting will not remove pus from the broad ligaments, lymphatics, or elsewhere. But it certainly tends to limit the infection by attacking the causable focus, and thereby gives the body a possible chance to protect itself, by the process of encapsulation, against the damages already done. Curetting the uterus for puerperal fever is offered as a general curative procedure when irrigation fails, and as a substitute for a useless and generally fatal laparotomy. The operation requires but few instruments. A short-billed, wide Sims speculum, a fairly stiff catheter, a sharp curette, a pair of stout American bullet forceps, long dressing forceps, Hunter's sound, and a syringe. The patient is in the lithotomy posture, and under ether if possible. The hair on the genitals should be cut short, and the privates and vagina scrubbed with soap, nail-brush, and bichloride. A few boiled towels at hand and five yards of iodoform gauze (5 per cent.). All instruments should be boiled, and the operator and assistants prepared by nail-brush, soap, and bichloride. The object is to do a clean operation in a clean field. The speculum is used to depress the perineum, and the anterior lip of the cervix is seized well into sound tissue by the bullet forceps and pulled down. The catheter is introduced into the uterus, and the cavity irrigated with bichloride 1:5000. I then curette the whole inside of the organ, working on a system by beginning at one cornu and going all around the cavity. The fundus is the hard part to get at and requires a lateral sweep of the instrument. When I have gone over the whole endometrium, I wash out with the same solution, and again carefully go over the inside of the uterus with the curette. This scraping and washing I repeat until I have gotten down to firm uterine tissue. It is the only way the sloughing, septic endometrium can be removed. The danger of the curetting lies in the use of a small instrument and introducing it too roughly to the fundus with a poking motion. There are apt to be soft spots through which the instrument may be thrust. When the organ has been sufficiently curetted and washed out, the parts over which the fluid has flowed should be protected by bichloridized towels, and the operator's hands again cleansed before he takes up the dressing. This may be iodoform gauze 5 per cent., or plain mull or lamp-wicking. The two latter should be boiled before using. Whatever is used should be wrung out in bichloride solution 1:5000. Some skill is required to introduce the gauze properly. It should be cut into one long strip about one inch wide and four layers thick. But this must be determined by the patency of the cervical canal. It must be packed into the uterus as tightly as possible, sufficiently so to come into apposition with every

part of the uterine wall and exercise some pressure. The end is left projecting from the cervix, and the vagina fairly well filled with the same material. These cases require to have the dressing changed the moment it gets soaked through. This will vary from a few hours to nearly three days. Whenever the dressing is changed, the same care should be taken and the same scrupulous cleanliness and irrigation carried out before fresh gauze is introduced. My first operation of this character was done in 1887, on a case of placenta prævia which became infected. Since then I have done the operation in cases of the most acute infection following labor and abortion, very many times. I have never lost a single case so operated upon.

THE TREATMENT OF DELIRIUM TREMENS.—At the recent meeting of the British Medical Association Dr. Norman Kerr said that delirium tremens might be either a morbid condition produced by nervous exhaustion, or a malady developed as an effect of alcoholic poisoning. He believed it was the latter, and arose from the cumulative specific action of the poison on the cerebral tissue through the alcoholization of the blood. Acting on this belief, for some time past he had aimed at eliminating the poison as speedily as possible. So far as he knew, this plan was first suggested in 1854 by Dr. Alexander Peddie, who generally prescribed antimony. The most serviceable drug in Dr. Kerr's hands, however, had been liquor ammoniæ acetatis. The main point was to avoid the administration of alcoholic liquors, opiates, chloral, bromide of potassium, and the like. These drugs tended only to aggravate the symptoms. The best hope of cure lay in natural exhaustion inducing sound, refreshing sleep. The differing results of narcotic and non-narcotic treatment were strikingly exemplified in the case of a publican who, when 48 years old, was treated for his second attack by opium and bromide of potassium, and in his third attack, two years later, by liquor ammoniæ acetatis. In the former seizure, though the narcotic draught at bedtime induced some sleep, the patient after the second night invariably awoke feeling confused and heavy, stupid, and with no relish for even the lightest food; the only craving was for spirits. The delirium steadily became more intense until it took four strong men to restrain him. The patient persisting in refusing food, dashing the cup with great force against the walls whenever he had the chance, and becoming more and more maniacal, Dr. Kerr, in order to save his life, procured him admission into the workhouse. He was there put into a padded room, and left to rave and storm at his pleasure. Strong coffee was given to him, which he at first angrily refused, but, latterly, craved for, no medicine at all being administered. Though at first he was hardly expected to survive, he made a good recovery in a week, but felt very weak and languid for some weeks afterwards. His succeeding attack was characterized by even graver symptoms; he had a fit (apparently epileptic) in the early stage of the delirium. As it was, for various reasons, extremely undesirable that he should be taken to the workhouse again, he was treated at home. From first to last no narcotic or anæsthetic was given. The only medicine used was liquor ammoniæ acetatis. A drachm was given every hour, till he perspired freely, and after that the dose was gradually diminished to 15 minims, the intervals being extended to four hours. In about seventy hours he had a short sleep, and in four hours more a quiet sound sleep which lasted for twenty hours. Thereafter, except when aroused to take nourishment, he slept naturally. All delusions and hallucinations disappeared on the fourth day of the attack. In eight days he was at his usual occupation again, behind the bar. The contrast between the effects of the treatment during the two illnesses was most marked. During the first, when awake he was constantly delirious, heavily stupid, or violent, continually trying to get in and out of bed. During the second he always awoke with head clearer, less confused, and a readiness to take food. During both attacks milk and soda, beef tea, meat juice, and chicken broth were relied upon to sustain the strength. No alcohol was prescribed on either occasion. In incipient cases, or indeed during the height of the attack, Dr. Kerr would prefer, if its application could be relied upon, a hot or cold wet pack, frequently repeated if necessary, to induce sleep. But in the absence of a skilled bath-attendant, he had found the liquor ammoniæ acetatis by far the most effective, acceptable, and reliable remedy which he had tried. By this method of wooing natural sleep, the first step in the cure, the patient's brain and nervous system were left undisturbed by any narcotic or anæsthetic; and the *vis medicatrix*, which, after all, is the most powerful factor in recovery from disease, had "a fair field and no favor."

Dr. Odell referred to the diffiulty of cutting off all stimulants. He sometimes found it necessary to have recourse to narcotics to procure sleep.

Dr. Robbs concurred with Dr. Norman Kerr in condemning resort to alcohol, and in advocating the use of hot baths.

ENDOSCOPY OF THE MALE URETHRA.—Dr. Wm. S. Gottheil contributes an article on this subject to the International Journal of Surgery, in which he makes a strong plea for the endoscope. He believes it will enable one with its use to more readily cure gleet. Inspection is by far the most important of our means of diagnosis of this disease. With its help we have certainty, accuracy, and definiteness. Without it we are often relegated to surmise, probability, and imagination. Eyesight knowledge equals in value that obtained by all the other senses together; and no pain is too great in the effort to extend its sphere. We endeavor to look around corners, into narrow passages, through solid tissues; and the triumphs of the ophthalmoscope and the laryngoscope are incentive and justification for our efforts.

The electric light has made urethral endoscopy a possibility. Ordinary daylight is not strong enough to penetrate into such recesses; direct sunlight is too uncertain, and lamps of gas or oil too cumbersome and too hot. The little incandescent globe gives us a light at once efficient and strong.

He prefers to make the endoscopic examination with the patient lying flat upon his back on an examining-table; but any of the ordinary chairs or a couch may be used. You get a better control over the patient and instruments when the former lies prone instead of in the semi-recumbent position. In any case the lamp-board must be so attached to the wall, to a book-case, or to the battery-box that the lamp itself shall be situated about 15 inches above the centre of the surface upon which the patient lies.

The patient being placed in position, the lamp and mirror are swung over and adjusted to the urethral orifice and about six inches above it, the endoscope is introduced, the obturator withdrawn, and the light turned on at the switch. The observer, sitting or standing as is most convenient, looks down directly through the orifice of the mirror into the illuminated tube. Mucous or pus shreds are removed with the tampon; and, as the tube is slowly drawn out, the urethral mucous membrane is inspected, and if necessary treated, as it is brought into view. As large an endoscope as possible should be employed. One of a less diameter than No. 20 of the French scale is quite useless, the tube being so narrow that no satisfactory field of view is obtainable. I habitually use one equivalent to No. 26 French; and when still larger ones can be used, the advantage gained is very great. The meatus must be enlarged in a good many cases; for which purpose a meatotome is preferable to an ordinary knife. After the abundant instillation of a 10-per-cent. cocaine solution, the instrument is set to the required size, introduced, closed, opened, and pulled out. Owing to the distensibility of the urethral and periurethral tissues, the instrument should be "set" to at least four sizes larger than the one we desire to cut to. This little operation must be preliminary to endoscopy where it is necessary; the bleeding interferes too much for immediate electric examination.

Cocaine should be employed in most cases of endoscopy. Half a drachm of a 10–15-per-cent. solution should be injected into the urethra with an ordinary penis syringe with removable rubber tip; the tips being kept in a boric acid solution. By manipulation the solution should be well spread through the urethra. The tubes themselves are best anointed with a 6-per-cent. boro-glyceride solution, rather than with vaselin.

The tube being introduced with obturator *in situ*, the first thing to do when a urethral field is exposed is to clean away any pus, shreds, fluid, etc., which would interfere with the field of view, with the cotton applicators —a considerable number of which should be kept ready-wound.

Three points are especially to be noted in endoscopic diagnosis; they are:

1. *The funnel or conus.* This varies in shape and in the bulging or flatness of its sides, in accordance with the pressure exerted by the endoscopic tube upon the urethra. It forms a circular swelling bounded by the light-ring reflected from the walls of the endoscope, and having the central figure at or near its middle.

2. *The urethral walls* vary in color in different parts of the urethral canal, from a pale yellow pink in the fossa navicularis to a deep crimson in the prostatic and membranous urethra. The mucous membrane visible in the endoscopic tube is thrown in folds, which run from the circumference to the centre in the normal state. In them can be seen the openings of Morgagni's pouches, the seminal eminence, the openings of the prostatic ducts, etc.

3. *The central figure.* A dark punctate, stellate, or linear figure, more or less centrally located in the endoscopic field. It is a vertical slit only in the fossa navicularis.

Variations in shape, color, and position of

these structures afford us the indications of pathological change.

Conclusions:

1. Inspection of the urethral canal is absolutely necessary for the rational treatment of urethral diseases. No oculist would treat conjunctival diseases in the dark.

2. The electric endoscope is the sole successful form of instrument.

3. The endoscope should be employed early in the diagnosis and treatment of obstinate or uncertain urethral maladies, it being a necessity in some and a help in all forms

4. Chronic urethral discharges can always be cured by an intelligent and persistent use of the instrument.

THERAPY OF CASCARA SAGRADA.—In an article by T. G. Stephens, M.D., in the Philadelphia Times and Register, July 16, 1892, on "The History and Therapy of Cascara Sagrada in Sciatic and Some Other Affections," the author writes as follows:

In several cases of *uscaris vermicularis* I have had the best of results from the administration of cathartic doses of the fluid extract of cascara sagrada. I have used the cascara sagrada in a number of cases of chronic rheumatism where the usual remedies in this affection had failed to give satisfaction, and with excellent results. Dr. L. P. Barber (Medical Summary, February number, 1888) says: "As an anti-rheumatic, I believe this remedy has come to stay." James M. Hale, M.D. (Medical Summary, November, 1888) says: "I have now treated ten cases of rheumatism with cascara sagrada with greater success than I have ever treated ague with quinine. From the standpoint of the clinician, cascara seems to possess certain properties which bear a striking similarity to the properties belonging to both ipecac and calomel. As regards its influence on the blood, cascara accomplishes more than ipecac, but it is less a stimulant to the hepatic function than that drug—a loss which is made up by its laxative effect, in which respect it strongly resembles calomel." Dr. John Auide, in the New York Medical Journal, June 28, 1890, says: "In small doses, repeated at short intervals, cascara is a laxative; but little, if any, griping is produced, and, unlike rhubarb, it is not astringent when used in this manner. On the contrary, the judicious use of the drug seems to favor the return of the healthy secretions of the entire alimentary tract, and, as a consequence, the stools are large and soft in consistence, and that peculiar burning sensation caused by the exhibition of aloes is altogether wanting. While aloes increases secretion from its irritant action, cascara more nearly imitates nature, the watery portion of the blood being removed from the system, thus lessening the tendency to pelvic congestions." J. V. Bustin, M.D., Belle Union, Ind., says (Mecical World, January, 1889): "I have used cascara sagrada in twelve cases of chronic articular rheumatism, and have found marked relief in all except one." Dr. R. C. Cobham, of Dayton, Ohio (Medical Summary, December, 1888), in speaking of the use of cascara sagrada in rheumatism, gives a number of cases which he has treated with this remedy. T. Goodwin, M.D., of the U. S. Marine Hospital Service, according to an article published in a recent issue of the New York Medical Journal, claims to have accidentally discovered in cascara sagrada a specific against rheumatism, exhibiting the drug first upon himself. He says: "I have since used the cascara in fully thirty cases, and, with the exception of three or four in which there was a syphilitic taint, I have obtained the most satisfactory results. I commenced with 1 c.c., t. i. d., and have so far never had to increase it beyond 1.5 c.c., and even to this extent in but two cases. I have seldom had to wait beyond twenty-four hours for beneficial effects." Further on in his article he says: "In many cases of chronic malarial poisoning, with relapses of chills and fever, which quinine or any other alkaloid of Peruvian bark would only check for the time being and never establish a permanent cure, we have been in the habit for a number of years, in all such cases, of commencing treatment by first administering a sufficient quantity of quinine to check the chills as soon as possible, and at the same time would prescribe, if the patient's bowels were constipated, fl. ext. cascara sagrada sufficient amount to procure several free evacuations during the following day; this would be followed with from 15 to 25 drops of fl. ext. gentiana quinque flora, combined with sufficient fl. ext. cascara sagrada t. i. d. to keep the bowels in a soluble condition; this treatment, along with the ordinary doses t. i. d. of elix. iron, quinine, and strychnine in all anæmic cases, would be continued for several months or longer, until all traces of the malarial poison had apparently disappeared from the system."

RECTAL INJECTIONS.—The employment of enemata as a means of relieving diseased conditions, while not a new therapeutic measure, is a valuable one, and its merits

demand more attention at the hands of practitioners than they have heretofore received. In presenting the subject for consideration at this time, however, it is not deemed advisable to discuss the advantages of medication by means of rectal injections, as the benefits to be derived from the use of water are so numerous and apparent that medicated enemata may be left to the good judgment and intelligence of the physician.

Originally employed for the removal of retained fæces, the practice doubtless fell into disuse owing to the fact that relief might often be obtained by the exhibition of irritant purgatives—an alternative which the laity were quick to appreciate, while they were quite willing to believe that causes which produced like effects must be interchangeable. This is far from being the case, clinical evidence showing beyond question that most purgatives produce, both directly and indirectly, more or less derangement of function, hence the means used to overcome one disease but precipitates another, and chronic maladies (many of them brought about by this cause alone) furnish ample opportunities for the industrious and promising quack.

Philosophy aside, the value of flushing the colon with properly sterilized water, hot, tepid, or cold, according to the special indications present, will be readily admitted in a long list of formidable diseases, some of which may be mentioned, as follows: Habitual constipation, with or without mental depression or active cerebral manifestations due to auto-infection, being so common, might be permitted to head the list; all occult nervous affections, associated or not with the uric acid diathesis, would naturally attract our notice, as it is well known that disordered innervation is generally conducive to the absorption of poisonous products from the alimentary tract. This treatment is also serviceable in diseases dependent upon pelvic congestions, such as uterine displacements, ovarian pains, and hæmorrhoids, for it contributes materially, though indirectly, to relieve the original cause, viz., hepatic insufficiency. In appendicitis, perityphlitis, and abscess, for which the *amœba coli communi* is now held responsible, it is invaluable. Mild, and even severe, cases of dysentery and diarrhœa are often brought to a favorable termination without enemata; but it is safe to say that, with appropriate diet, all cases would be decidedly benefited and many fatalities avoided by the adoption of this simple means. Enemata should find a place in the treatment of other disorders of this character, notably in the collapse of cholera morbus, yellow fever, and cholera, as well as in the conduct of cases of pleurisy or typhoid fever.—*American Therapist*, July, 1892.

Epidermin, a Base for Dermatological Applications.—Kohn (Internationale klinische Rundschau, No. 15, 1892) experimented for the production of an ointment-base which would not, like the others thus far in use, prove serviceable in but one or another dermatological preparation, nor carry with it other objectionable features. His investigations resulted in "epidermin," which proves a good vehicle for a large number of drugs, fixes the incorporated substance well, does not irritate, does not decompose or become septic. It is made as follows:

Pure bees-wax is worked into the consistence of liniment with water and glycerin until it becomes a milky, semi-fluid mass which, on exposure to the air, grows more consistent. When painted upon the skin, it dries in a few minutes to an adherent, elastic, delicate pellicle. This pellicle is easily removable by touching it with water.

When incorporating drugs with epidermin, care must be taken to prevent its forming layers. This is accomplished by triturating the prescribed drug with 10 per cent. of the glycerin of the epidermin-mass, and gradually adding it thereto while the whole mass is being stirred.

In practice Kohn found the following useful:

(*a*) Simple epidermin, as an excellent protective covering in excoriations and fissures (as cracked or chapped lips) and to retain small dressings.

(*b*) Zinc oxide-epidermin (5 to 30 per cent.) in eczemas which do not weep very much.

(*c*) Tumenol-epidermin (10 per cent.) in artificial and weeping eczemas. The itching is arrested soon after its application.

(*d*) Resorcin-epidermin (2 per cent.) in weeping eczemas and furunculosis.

(*e*) Chrysarobin epidermin (10 per cent.) in psoriasis. It is painted upon the affected site every second or third day, after a bath; in mykosis furfuracea, marginata, and tonsurans, two or three applications suffice to cure the disease. Itching stops immediately after application.

(*f*) Pyrogallol-epidermin (5 to 10 per cent.) in impetigo contagiosa.

(*g*) Plumb. iodat.-epidermin (10 to 30 per cent.) to stimulate resorption in glandular swellings and orchitis.

(*h*) Ol. fagi cum epidermin (10 per cent.) in eczema squamosum.

(*f*) Iodoform-epidermin (10 to 20 per cent.) in ulcers and burns.

(*g*) Hydrarg. bichlorat.-epidermin (1:1000) in mucous patches and furuncles.

(*h*) Ichthyol-epidermin in erysipelas, acne rosacea, and chilblains.

In the diseases and conditions below, the following formulas yielded excellent results:

Sycosis and eczema seborrhoica:

℞ Ac. salicyl. } āā 5.0 (ʒ 1¼).
Resorcin }
Sulph. præcip., 10.00 ʒ iiss.
Epidermin, ad 100.0 (ʒ xxv).

Chloasma and ephelides:

℞ Bismuth sub. nit. } āā 5.00 to 10.0
Hydrarg. præcip. alb. } (ʒ 1¼ to ʒ iiss).

Lupus vulgaris:

℞ Ac. salicyl. } āā 5.0 (ʒ 1¼).
Creasot. fag. }
Epidermin, ad 100.0 (ʒ xxv).

Diphtheria and Croup.—The science of bacteriology has already opened a floodway of light upon many obscure problems in the ætiology of disease; and evidence is not wanting as to the practical application of the information obtained from this source. While perhaps not yet absolutely proved, there is abundant testimony, clinical and otherwise, pointing to the identity of the two processes, diphtheria and croup. Partly in consequence of early teaching, partly because the evidence is not conclusive, there is still a minority that maintains the individuality of the two affections. One of the most conclusive clinical arguments of their identity is afforded by the fact that in some of the large Continental hospitals cases of croup and diphtheria are placed side by side in the same ward, and the cases of croup do not become infected; while it is not rare for diphtheria to develop in a family in which an apparent case of croup has been present.

The almost general acceptance of the dictum of identity is indicated by the tendency to treat cases of croup as though they were diphtheritic, and the instructions of boards of health that cases of croup be reported. Fraenkel (Deutsche Medicin. Wochenschr., No. 24, 1892, p. 564) has added an opportune and valuable contribution to the controversy. The opportunity was afforded him of holding autopsies in four cases, clinically typical instances of croup. In none were subjective or objective evidences of pharyngeal involvement present. All presented hoarseness and marked difficulty in breathing. In two, tracheotomy was performed. The autopsies confirmed the freedom of the pharyngeal structures. In one case the membrane was situated below the glottis. Examination of the membrane present in each case disclosed the presence of the bacillus of diphtheria described by Klebs and Loeffler, the identity of which was absolutely assured by its morphologic appearances, by its behavior in culture, and by its pathogenicity to animals. It is true that the number of cases reported is small, but the evidence adduced is positive and conclusive, and not to be controverted by any negative evidence.

Investigations by Middeldorpf and Goldman (Deutsche Medicin. Wochenschr., No. 24, p. 570) have disclosed the identity of the pathologic processes in croup and diphtheria. In both there occurs an intense inflammation of the mucous membrane, leading to destruction and desquamation of epithelium. Abundant exudation takes place, with subsequent coagulation and the formation of membrane.—*Philadelphia Medical News.*

Treatment of Fissure of the Nipple.—Dr. Barton Hirst, of Philadelphia, in the University Medical Magazine for March, advises the use of an application of equal weights of castor oil and subnitrate of bismuth in the treatment of fissure of the nipple. The nipple and adjacent parts should be thoroughly washed and disinfected before applying the ointment. One of the advantages of this application is that it need not be removed if it becomes expedient for the child to nurse at that breast. The ointment makes a smooth and flexible coating which not only serves as an efficient protective, but tends to reduce the pain and reflex irritation. For the mammary engorgement and pain that so frequently occur when the nipple becomes fissured, he advises the employment of lead water with laudanum, in addition to the ordinary sling-compress. The entire breast should be covered with a cloth wet with the lotion, and the applications should be repeated at short intervals. This line of treatment ordinarily prevents the formation of abscess. It is best to allow the unaffected breast alone to be nursed, and the milk from the affected side can be drawn off with the breast-pump. If it be imperative that the infant shall nurse at the fissured nipple, a glass shield with a rubber tip may be used.

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Original Articles.

TREATMENT OF DISEASES OF THE RESPIRATORY ORGANS BY BUTCHER'S DIRECT CONTACT METHOD.

BY F. M. R. SPENDLOVE, C.M., M.D.*

Statistics show that in the United States alone over three hundred thousand persons die annually from consumption, and the number suffering from catarrhal diseases of the air-passages is computed to be over five millions.

It is evident from these facts that we as a profession are either negligent of this branch of our healing art, or that our means of combating these diseases are inadequate. That we are not negligent is proven by the fact that the search-light of some of the brightest intellects of our profession has long been turned into this dark corner, from which reports of startling discoveries follow each other in regular succession; each in turn, however, when subjected to the searching test of "clinical use at the bedside," has proven but an *ignis fatuus*.

This fact, as well as the great prevalence and mortality of this class of diseases, should make us examine well into our *methods* of treatment, as well as the means employed. Two methods are in use in the treatment of this class of diseases: the indirect and the direct contact method.

In the indirect method the medicine is taken into the stomach, where it must first come in contact with the digestive fluids, which in the case of many drugs completely alter their composition. From the digestive tract a part (how much we know not, neither its composition) enters the general circulation, is carried to all parts of the body, finally making its exit through the various emunctories, and, with the exception of a minute quantity of a very limited number of drugs which pass out of the system through the bronchial mucous membrane, never reaching the pulmonary surface. That this method is both *irrational* and *unscientific* is evident on a moment's consideration.

By the direct contact method an endeavor is made to apply medicinal substances to the affected surfaces by the use of respirators, nebulizers, inhalers, etc. This method has occupied the attention of the profession from a very early period. It has given promise to be "competent to the production of results which probably no other means are capable of effecting."* It has the sanction of the most eminent clinical teachers in respiratory therapeutics in all countries. Competent and trustworthy observers have repeatedly cited cases where it would appear that this method had been instrumental in effecting cures, or at least retarding the progress of the disease. Yet with all this it cannot be said that the direct contact methods which have heretofore been employed have fulfilled the high expectations entertained of them, nor have they found a permanent resting-place in the practice of the profession. If we seek for the cause of this, we have not far to go. The means hitherto employed for bringing medicinal agents in contact with the mucous membrane of the respiratory tract have but *imperfectly fulfilled their object.* From time to time physicians of a mechanical turn of mind have brought forward some new or modified form of respirators, nebulizers, inhalers, etc., but with the construction of each there has been a failure to recognize the important fact that neither air, steam, or water can be employed as a vehicle for carrying solid medicinal substances to the air-passages in quantities corresponding to their recognized therapeutic doses.

No better proof of this statement is needed

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*Dr. Chas. Gibson (American reprint), May 1892.

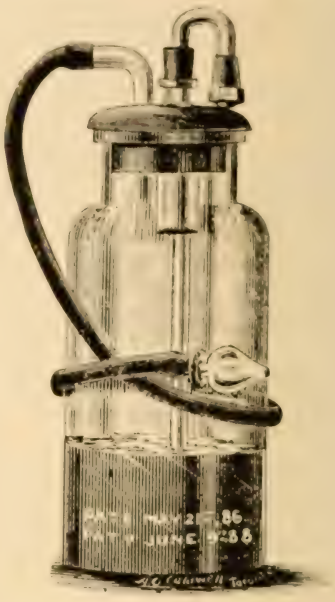
than the experiments made by Arthur Hill Hassell, M.D.,* London, which are as applicable to the instruments now in use as they were to those with which the experiments were made.

Detailing the results of his experiments with the naso-oral respirators then in use, he states that after the completion of one or two hours' inhalation more than four-fifths of the medicine was recovered from the respirator; some of it was lost in the manipulation necessary to its recovery. A still larger amount was absorbed by the skin of the lips and the mucous membrane of the mouth, nose, and throat; so that it is extremely doubtful if any portion ever reached the pulmonary surface—and this doubt is greatly strengthened by the fact that the sputum brought up shortly after the inhalation had no odor of the drug used, *i.e.*, carbolic acid. Another fact corroborating this is that the expired air during inhalation of the acid was passed through distilled water, which was afterwards tested for the acid and gave only the minutest trace.

In his experiments with air and steam sprays, a very large proportion of the drug was also recoverable. In summing up the results of his experiments with the different methods employed, he states that "it is difficult to suppose that the small quantity of medicine lost during the several inhalations could exercise any marked effect, even if the whole quantity made its way to the seat of the disease, which it does not."

In Butcher's direct contact method the nascent vapor of ammonium chloride is used as a *vehicle* for carrying the drugs to the affected surfaces; not as a *medicament* itself, as with other ammonium-chloride inhalers. It is important to note this distinction.

The medicine to be inhaled is put in the large bottle; a few drops of strong solution of ammonia are added. The small bottle or vial inserted in the cap of the inhaler is filled nearly full of chemically pure hydrochloric acid. To operate the inhaler: Remove the corks; slightly raise the long tube, turn it round and introduce the end into the neck of the small vial, about half an inch from the acid; place the nozzle at the end of the rubber tube in the mouth or nostril, and take a full inspiration, then remove the nozzle —when using the mixture for catarrh allow the vapor to pass out through the nostrils; when using for bronchial or pulmonary disease retain the vapor in the lungs. Great care should be taken that the tube does not touch the acid, and also not to blow through the rubber tube into the inhaler. In the former more ammonia must be added to the mixture; in the latter the acid vial must be emptied and refilled with new acid.



PRINCIPLE OF ACTION.

On inhaling, the air passes across the acid, becoming charged with its fumes, thence down the glass tube into the inhaler, immediately uniting with the ammonia in the mixture, forming the vaporous crystals of ammonium chloride; the crystals so formed pass upwards through the mixture, becoming coated with the drugs therein suspended, and then pass through the inhaling-tube into the air-passages. The drugs must be so mixed as to remain in suspension; if precipitated they are beyond the reach of the vapor.

The inhaled vapor, as it passes to the lungs, consists of the minute crystals of ammonium chloride, covered with the medicines suspended in the mixture through which they have passed; the crystals acting as a

* Lancet, May 6 and Oct. 6, 1883.

solid vehicle for carrying the medicinal substances to the entire respiratory tract. That the drugs are really carried there by the crystals in measurable quantities, may be proven:

1st. *Chemically.* In filling the empty inhaler bottle half-full of distilled water, add a few grains of magnesium sulphate, also a few drops of a strong solution of ammonia; adjust the glass tube as directed, and inhale; then blow each inhalation through a glass tube the lower end of which rests at the bottom of a tumbler of distilled water. Repeat the process for a few times; then test the water in the tumbler for magnesium sulphate by adding a test solution of baric chloride. An abundant white precipitate of baric sulphate will demonstrate the introduction into the air-passages of the substances contained in the inhaler through which the vapor passed.

2d. *Microscopically.* Add a few grains of any salt whose crystals are easily recognizable under the microscope, to the water in the inhaler; inhale as before; blow the exhaled vapor upon a piece of white paper covered with a thin layer of moist mucilage, and examine under the microscope; the crystals of the drug will be seen in great numbers. These crystals can also be recognized in the sputum brought up from the bronchi, the vapor having been allowed to remain in the lungs instead of being exhaled.

3d. *Physiologically.* Add to the distilled water in the inhaler any drug foreign to the body, the time and channels of elimination of which are well known; inhale for a few minutes; afterwards test with the proper reagents the secretions through which the drug is eliminated.

Other methods of proof might be given, but these will be sufficient to show that by "Butcher's Direct Contact Method" medicinal substances can be carried to any part of the respiratory tract, at the normal temperature, and without the use of air, steam, or water as a vehicle.

Herein lies the superiority of this over all other direct contact methods.

REPORTS OF CASES.

It will not be necessary to take up your space or the time of your readers giving details of cases of simple and hypertrophic catarrh, acute and chronic bronchitis, hay asthma, whooping-cough, and influenza—many of them test cases—that have been successfully treated by this method with appropriate remedies; I will simply cite a few showing the rapidity of action of remedies in diseases of the respiratory tract when applied directly to the affected surfaces by this method, the permanence of cures, and its uniform success in cases where other well recognized therapeutic measures have failed.

Case 1.—Atrophic Catarrh, Ozæna, and Chronic Bronchitis. Child four years of age; German parents; good family history. Began using the inhaler April 15, 1892, with the *A* mixture.* At that time the odor of breath was so disagreeable that patient was obliged to eat and sleep alone, and could not remain in the same room with the other members of the family more than a short time without the odor becoming unbearable to them. She had a severe cough, profuse expectoration of a greenish-yellow color, and was greatly emaciated. The origin of the trouble dates back to an attack of bronchitis when but seven months old. She was then prescribed cod-liver oil emulsion, since which time she has taken *one hundred pints.* After two weeks' use of the inhaler, four times daily, ten minutes at a time, the odor had so much lessened that she could mingle with the other members of the family the same as the other children. After two months' treatment the odor, cough, and expectoration had entirely disappeared. She is now the picture of health. A few minutes' use of the inhaler morning and evening keeps the nose and throat free from excessive secretion and the breath free from odor.

Case 2.—Chronic Laryngitis with commencing Consolidation of Left Apex. Married lady, 30 years of age; mother of one child seven

* This mixture contains thymol, iodine, and oil eucalyptus suspended in tar-water. It is used alone in all chronic catarrhal conditions of the nose, throat, and bronchi, and as a base mixture to which other drugs may be added as indicated. In cases in which there is much bronchial or naso-pharyngeal irritation, and also in cases where the inhaler cannot be used frequently, it is better to add tincture benzoin co. to the *A* mixture, as, by delaying absorption, it retains the drugs for a longer time in contact with affected surfaces.

months old. Brother and sister died of phthisis. Began treatment with the *A* mixture with pyoktanin, Dec. 14, 1891. At that time there was almost complete aphonia. The hoarseness began six months before, gradually getting worse. During damp weather the patient could not speak above a whisper; cough very frequent, worse at night, preventing sleep; expectoration profuse; night sweats every night; greatly emaciated. Had been under treatment for several weeks with usual therapeutic measures by the indirect method. After ten days' use of the *A* mixture with pyoktanin the hoarseness had almost disappeared; cough much less frequent; sleeping all night; expectoration lessened in quantity, lighter in color, and much thinner. After three weeks the treatment was stopped, all the symptoms having disappeared, and she then returned to her former position as soprano singer in a church choir. There has been no return of the hoarseness or of the other symptoms; it is now eight months since their disappearance. The chest expansion increased one and a half inches during the three weeks' treatment.

Case 3.—Tubercular Softening of Left Apex and Consolidated Left Base. Young man, 27 years of age; accountant. Family history of phthisis. Had pneumonia in left lung in 1887, influenza in 1890, since which time he had been ill and under treatment by indirect and direct contact methods. Had also tried change of climate, living for some time in Colorado and British Columbia. Began treatment with *A* mixture with pyoktanin Feb. 23, 1892. At that time there was almost complete aphonia, which had resisted treatment applied direct to the larynx regularly for the five months immediately previous; cough very frequent; expectoration profuse; bacilli numerous; night sweats; emaciation; hectic, temperature averaging 102° during the height of the fever.

After four weeks' use of the pyoktanin* it was stopped, and iodoform with guaiacol suspended in oil eucalyptus was added to the *A* mixture.† This combination has been continued to the present time. The hoarseness, night sweats, fever, constant cough, profuse expectoration, emaciation, and general prostration are long since matters of history.

Two weeks after beginning the treatment he resumed his usual occupation, since which time to the present he has lost but ten days, and that occurred in June last while away on his wedding tour.

Case 4.—Catarrhal Deafness. Gentleman, 38 years of age. Began treatment in September, 1891. At that time there was almost complete deafness. Ordinary communications had to be carried on in writing. Failing to obtain relief in this country, he had sought advice in London and Paris. The most eminent aurists there could give him but little hope of his ever recovering his hearing again. After two months' use of the *A* mixture with menthol added, hearing was completely restored, and the treatment then stopped. Hearing has continued perfect up to the present time, nine months from the withdrawal of treatment.

Case 5.—Bronchial Asthma. Married lady, 35 years of age. Paroxysms frequent and prolonged. For seven days previous to treatment she was unable to lie down. After one month's use of the *A* mixture all symptoms of asthma had disappeared, and there has been no return since; the cure was accomplished six months ago.

Case 6.—Cardiac and Bronchial Asthma. Young man, 20 years of age. Trouble dated back to an attack of measles when but two months old. Began treatment April 15, 1891, with the *A* mixture with wine of ipecac and spirits chloroform. At that time the paroxysms occurred regularly every night, each

* From a careful study of the action of pyoktanin in this class of diseases, it appears to be a useful addition to the *A* mixture during the ulcerative stage of lesions of the upper air-passages and apices of the lungs. After there is evidence of these having healed, it should be stopped.

† *Theoretically* this is the ideal mixture for pulmonary phthisis—the *A* mixture for the catarrhal condition always present, the iodoform for its bactericidal action, and the guaiacol "to combine with and eliminate from the system through the kidneys the toxic products of the bacilli circulating in the blood" (*Dr. Max Schueller*). *Practically* this combination, with a careful regulation of the diet according to principles hereafter detailed, has given the most uniformly successful results, in all stages of the disease, of any combination yet used by this method.

lasting from one to two hours, the dyspnœa being so great that cold water had often to be dashed over the patient to enable him to recover his breath. Almost all known means for giving relief had been tried for years, but without lessening the frequency or diminishing the severity of the attacks. After four months the treatment stopped, and the patient has had but four slight attacks since, and each traceable to some error in diet.

A careful study into the origin of over two thousand cases of catarrh and pulmonary diseases, occurring in persons of all ages, and among all classes, shows a common starting-point of the whole series of cases. This point is *improper diet*—a diet not suitable to the requirements of the particular temperament of the individual, his occupation, or his environment.

In one class of cases, occurring usually in persons of about middle age and of dark complexion, with whom the diet consisted largely of nitrogenous food, with but little drink or active exercise, the first deviation from health took the form of dyspepsia. The pain, usually of a burning character, and most severe when the stomach is empty, is often relieved by taking food. The tongue (an important indication of the presence of this form of dyspepsia) is narrow and pointed, its surface red, rough, or smooth and transversely fissured. If not relieved in this stage by change of diet and appropriate medication, the next step is a naso-pharyngeal or bronchial catarrh, usually of the dry form. From this condition, if allowed to continue, the sequence of events to the final termination can be outlined with mathematical certainty. During the fibroid stage an asthmatic condition often supervenes. This may continue through the whole subsequent course of the disease (asthmatic phthisis). The progress through the different stages is usually slow, sometimes extending over years. The results of the direct contact treatment are satisfactory even in the beginning of the tubercular stage. The important point is to recognize the condition and stage of the disease. The excess of uric acid in the circulation—the ætiological factor in this class—does not appear to possess any selective action upon the mucous membrane of the respiratory tract unless directed there by local irritation. This irritation is induced by want of cleanliness of the nose, throat, and bronchi.

The therapeutic indications are clearly defined; and the results of treatment, if begun before the final stage is reached, are uniformly successful. The production of uric acid should be curtailed by the elimination of meat of all kinds from the diet, which should consist chiefly of grain foods—as preparations of wheat, oatmeal, and corn,—green vegetables, and ripe fruits. Increased elimination of the acids should be encouraged by a free use of hot water, half a pint to a pint to be taken slowly an hour before meals and at bedtime—a few grains of carbonate or salicylate of lithium added to the water materially increases its eliminative action.

The respiratory tract should be kept perfectly aseptic, free from excessive secretion and irritation, and the air-cells fully expanded by a frequent use of the inhaler—with the *A* mixture alone, or with the compound tincture of benzoin added.

A second class of cases, occurring most frequently in the young and in those of light complexion, in whom the diet has consisted largely of starchy foods and sweets, also begins as a *dyspepsia*—a sense of weight and fullness after meals, flatulence, and constipation. The tongue is also an important indication of the presence of this form of dyspepsia; it is broad, the edges often teeth-indented, the surface pale, slightly furred, the papillæ enlarged and appearing as minute red points. If not relieved in this stage, the next step is a naso-pharyngeal or bronchial catarrh, usually accompanied with a profuse secretion. If this condition is allowed to continue, pulmonary tuberculosis soon follows and is rapidly fatal. The progress through the different stages to a fatal termination may not exceed six months; hence the vital importance of the early recognition of this condition, and its prompt treatment.

The ætiological factor appears to be, in addition to an excess of uric acid as in the first class, a product of fermentation of the starches and sugars taken as food, which is foreign to the body, and which makes its exit through the mucous membrane of the respiratory tract, directly irritating the surfaces in

its passage. According to the experiments of Dr. B. W. Richardson (Asclepiad, 2d and 3d quarter, 1889), this product would appear to be *butyric acid*. The therapeutic indications are, as with the first class, clearly defined; but the treatment must be more active and the diet more restricted. There should be frequent use of the inhaler with the *A* mixture for the catarrhal condition; and if bacilli are present, or if there is physical evidence of tubercular deposits in the lungs, the iodoform and guaiacol mixture should be added, and the latter also given internally. All foods capable of undergoing fermentation must be prohibited. A diet consisting of the pulp of lean beef, perfectly free from fat and connective tissue, properly cooked, with a free use of hot water (Salisbury diet), is the only safe diet in these cases.

2760 St. Catherine St., Montreal, Canada.
September 1, 1892.

THE MANAGEMENT OF CHOLERA.

BY DR. G. ARCHIE STOCKWELL, F.Z.S.

Now that cholera is at our very doors and vigorously seeking an entrance, any light that may be thrown upon either the pathology or therapeusis of the malady is most welcome.

What the poison of cholera may be is still a moot question, and Koch's assertion it depends on, or resides in, the *comma bacillus*, is far from being conclusive. The symptoms that usher in the seizure indicate a form of poisoning so obviously, that the chief upholders of the bacillus theory have been compelled to hesitate, and even inquire whether after all some ptomaine or other alkaloid may not be the specific virus. Finally, Drs. Lewis and Cunningham, of the Army Medical School at Netley, England, have shown the bacillus of Koch is constant in the mouth and throat of healthy personages; and though Koch rejoined his bacillus differed in size and shape, the accurate measurements undertaken by these gentlemen in connection with Arthur E. Brown, and verified by Sir William Aitken, and the reaction to staining fluids, prove the precise contrary. Again, cholera fluid may be boiled and disinfected to complete extermination of all bacilli, yet fail to lose its infectious and toxic properties (Aitken, Lewis, Cantani, Klein, Klebs). It is evident, then, the bacillus of Koch is not, *per se*, a cause; and time has only confirmed the utterance of Trichum, *apropos* of this microbe, that the purported discovery no more definitely settled the question of cholera than knowledge of the bacillus of tuberculosis will terminate pulmonary consumption.

It is certainly folly to prate of curing cholera when the very principles which should guide the treatment are undecided, antagonistic, and devoid of physiological basis. To this hour, among many—the majority, in fact—the question is mooted whether recovery depends upon *persistence* of the intestinal evacuation, or upon its *suppression*. That patients have recovered, and do recover, under all kinds of treatment, often widely different and aggressively antagonistic, is universally acknowledged. In nineteen cases out of twenty the remedies prescribed by mouth or enema are returned unaltered in the vomit or stool, or else mingle with the fluids in stomach and bowel without being absorbed until the crisis is over, when they are very apt to prove mischievous.

Prior to the last epidemic in England there were few practitioners who did not believe it a duty to check the so-called premonitory diarrhœa with astringents and opiates, and reports of thousands of cases might be collected where medical men believed that by this method they prevented the development of the stage of collapse, though it is apparent the theory upon which such practice is based is very far from infallible. Further, the whole subject has been so complicated by the publication of immature hypotheses and extravagant conceits, and the views held by different individuals seeing the same class of cases in the same institution are so opposite, it seems difficult to form any trustworthy opinion. Physicians, only after each epidemic, learn that the lessons they taught and the principles they inculcated with so great care and energy are possessed of no real value—in reality have a mischievous tendency. Taking these circumstances into consideration, the bewildered practitioner may well ask: 'What shall be done?'

It is strongly advised to scout all extravagant plans of treatment and not worry the

sufferer with nauseous remedies that, to say the least, have time and again proved utterly useless. First isolate him as far as possible, securing at the same time a plentiful supply of fresh air. Next see that his drinking-water is pure, particularly that it has not been drawn from any sewer, sink, or river that is used as a cesspool.—For obvious reasons the rain-barrel is safer than the well. Empty the sick-room of all superfluous furniture, of curtains, carpets, etc., covering the floor and neighboring passages with sawdust or sand, wet with some disinfectant solution, as dilute Solution of Aluminium Acetate, Eucalyptus-thymol, Antiseptic Liquid, or Labarraque's Solution; and when removed the same should be wholly burned or purified by fire. Sulphurous acid gas may also be used for fumigating purposes. All excreta must be received in pans containing strong disinfecting fluid, and at once cremated or buried—certainly not thrown into drains, sewers, or streams. Finally, the soiled body- and bed-linen should be soaked in an antiseptic solution (solution of corrosive sublimate if desired) or in boiling water containing some disinfecting powder, and afterwards washed with carbolic acid soap.—Better if they, too, should be burned.

It need scarcely be added that the importance to the community of the preventive measures just outlined against infection can scarcely be exaggerated.

An attack of diarrhœa is on no account to be neglected. The sufferer should at once be sent to bed, kept quiet, carefully nursed, and allowed to drink freely of soda-water, plain pure iced water, cold coffee, or milk and water, as often as thirsty; tea, either cold or warm, is quite prone to provoke or increase nausea when there is choleraic tendency. Farinaceous food, with well-salted beef or mutton, may be taken. Poultices may be applied to abdomen for relief of pain, or, better still, half-a-dozen thicknesses of flannel saturated with a mixture of chloroform and alcohol (1 to 12) and covered by oiled silk or rubber cloth to prevent evaporation.

Any suggestion of sinking or faintness may be controlled by gentle stimulation; but all drugs having a tendency to either encourage or repress looseness of the bowels are best avoided. In the stage of collapse, efforts are to be directed toward the restoration of animal heat; friction, turpentine stupes, sinapisms, dry and hot flannels and blankets, bot bottles to the feet, etc., here may find useful places; recourse may be had to enemata—hot water containing small quantities of potassium chlorate or common salt. While there seems a prejudice on the part of many medical men against warm baths, Dr. Tanner states as a fact that in 1866, at the London Hospital, prolonged immersion at a temperature of 98° to 104° F. certainly did no harm, while it "frequently proved so grateful it was difficult to get the patient out of the water."

To relieve the thirst, weak saline lemonade containing chlorate of potash and other salts has often been preferred to plain water; and if the arguments (which at first sight seem strong) in favor of allowing such drinks, are unsound, still nothing can be alleged against this practice. During the whole of the third stage the recumbent posture is strictly to be maintained; the patient being lifted on a sheet and blanket into the bath, if one be given.

With reference to the other medication, it may be fairly said that the chances of recovery are probably lessened by the use of astringents, opiates, and alcoholic drinks in general, and the evidence in favor of the opposite plan—of emetics, purgatives, etc.—is very far from being satisfactory.

Be the origin of cholera what it may—miasmatic, ptomainic, bacillar, telluric, or meteorologic—its *neurotic* character is most clear. As far back as the time of Cullen the malady was classed in the "*order* Neuroses, *class* Spasms." Sir Henry MacCormac, who had extended experience in the epidemic of 1834 in Ireland, regarded it as provoked by a lesion of the abdominal sympathetic system—a view ably corroborated by Chas. Lever, and subsequently upheld by Sedgwick, Johnson, Claude Bernard, D'Arsonval, the elder Chirmac, Pisani, Cannatacci, Michael Foster, and especially Alexander Harkin.

The influence of the nervous system is very manifest in both subjective and objective symptoms. The vomitings and numerous stools evidently result from either a paralyzed or a hyperæsthetic sympathetic—

two conditions that, apparently antagonistic, are physiologically the same, differing only in degree and the latter depending upon the intensity of the poisoning: the crises, cramps, vertigo, anxiety, spasms and tremblings, all are of neural origin; further, the entire series of symptoms is precisely paralleled in the toxic manifestations of certain cadaveric alkaloids, and also of muscarine (both a cadaveric and vegetable derivative), one of the most powerful nerve-poisons known. Finally, the rapid deaths due to so-called *cholera sicca* (dry cholera), which are observed during epidemics and in patients who had previously enjoyed good health, can only result from powerful influence upon certain nerve centres, since they are for the most part preventable by the free use of hydrocyanic acid, alone or in combination with chloroform.

The practical application of admitted physiological and pathological principles, and the discovery of constant relations of cause and effect, suggested the idea of a well-defined law in this affection. It is, moreover, to the sympathetic system that must be referred the depression of the functions of respiration and circulation, which constitutes the gravest factor in cholera; therefore in antagonism of the sympathetic is afforded the key to rational physiological treatment.

The fact may be recalled that the pneumogastric (vagus) is an inhibitory nerve and possesses an action antagonistic to that of the sympathetic on the heart. By stimulating the sympathetic part of the heart its contractions are augmented; but by acting thus on the vagus it is possible to arrest the heart in full diastole. The stimulation of the vagus, then, is an important indication; that is, the re-establishment of the cardio-inhibitory functions of this nerve, which are evidently absent in cholera. By so doing, the violent contractions and palpitations cease; the energies of the heart cavities, especially those of the left side, are restored; the congestion of the pulmonary and cutaneous systems disappears.—Simon and others have shown that in cholera the left side of the heart is generally emptied, while the right side is distended and filled with blood; Sicluna and Bruce, performing autopsies on patients who succumbed at Malta, during the epidemic of 1887, always discovered the cavities of the left heart empty and those of the right filled with blood; George Budd (in Medical Chronicle, volume xxi) notes concentric hypertrophy in all cases of sudden death from cholera, and moreover cites the expérience of M. Jackson, who in 1832 observed that the hearts of persons who succumbed to this malady often presented hypertrophy of the left ventricle.

In all attacks of cholera, then, regardless of stage, the first indications are, to stimulate the vaso-inhibitory apparatus and antagonize the sympathetic (especially its solar plexus), by sedation, by reflex, or by both. The remedies most available for such purposes are, in order: (1) Hydrocyanic Acid; (2) Chloroform; (3) Cannabis Indica. Happily we have these all, with Morphine and Capsicum added, in the combination entitled Chloranodyne, a preparation that is not alone an improvement upon the old proprietary chlorodyne, but, by the dropping of certain inert and nauseous ingredients, is far less antagonistic to a sensitive or irritated stomach. The action of this fluid is in a measure dual, in that it allays the irritation induced by a poisoning of the sympathetic, and at the same time stimulates the vaso-inhibitory apparatus, thereby relieving the spasmodic congestion of the arterioles that leads to oppression and depression of both cardiac and pulmonary functions; the preparation is still further available in that it is intensified by the powerful revulsive effect of the contained capsicum.

Next, if the Chloranodyne is insufficient, the sympathetic may be further and more powerfully antagonized by stimulation of the pneumogastric as advocated by Dr. Alex. Harkin, and so successfully employed in Malta during the epidemic of 1887. Three preparations are available for this purpose—one, equal parts of saturated tinctures of ginger and capsicum; another, the essence of mustard oil; finally, the epispastic liquor of the British Pharmacopœia, made by percolating five parts of cantharides with twenty parts acetic ether; and these should be applied freely over the branches of the pneumogastric in the neck (beneath, in front of, and behind, the ear), covering three inches of sur-

face, preferably on the right side (Coleman having demonstrated the right vagus commands the smaller intestine); if the case be one of extreme urgency the liquid may be applied also beneath the eye, and, if desired, both right and left vagi excited. The effect is almost instantaneous, and all morbid phenomena are annihilated before vesication can take place. With the first two preparations, if mitigated at all, vesication may perhaps be avoided; but in cases of extreme collapse the epispastic liquid should receive entire preference—Chlor-anodyne being at the same time given by the mouth, in syrup or on sugar, in full doses of 30 minims. By developing the inhibitory power of the vagus, vomiting, purging, and cramps are rapidly arrested; the pulse regains its power, bodily temperature is increased, and the patient speedily falls asleep.

According to Prof. Pisani, Chief of the Health Service at Malta, cholera made its appearance in the Island on the 25th of July, 1887, and the mode of treatment outlined above was begun on the 31st of the following August. In his report to the Government Pisani remarks that 'the amelioration was very rapid.'

Dr. Inglott, Surgeon of Zabbor Hospital, says: 'It has often succeeded in the gravest cases where other treatment had proved futile, not only in my hands, but also in those of my friend Dr. Cannatacci at the Zeitum Hospital. We worked together, and every day exchanged observations on this important subject. This treatment often gave us astonishing results, and my sincere conviction is that thereby we were enabled to save many patients from death. I recall, amongst others, that of a poor child of eight years, who was so cold there seemed to be no hope; all tried remedies had proved useless; when I saw him in the morning, he was dying; in the afternoon he was convalescing—and all this had been accomplished by profound antagonism of the sympathetic.'

These observations require no special comment, and it would be useless to dwell further on the importance of rapidity of treatment in an affection where moments are so precious. The sleep which the revulsive fluid (externally) secures in connection with Chlor-anodyne (internally), and the re-establishment of the balance between circulation and respiration, tends to abort the malady and to oppose the typhic condition or secondary fever that frequently is a convalescent sequel.

After all, the treatment of maladies is a part of their pathology; the nature, the power of the remedy, and the modifications which follow its application, are the surest guarantees of the character and tendency of the disease.

MOIST ANTISEPTIC DRESSINGS IN INJURIES OF THE HAND.*

BY CHARLES H. MERZ, A.M., M.D.

There is no department of surgery in which conservatism assumes a more important rôle than in injuries of the hand. Not infrequently these injuries are severe in character, and they require careful, judicious treatment. Many times the physician or surgeon, actuated by a desire to utilize every shred of tissue and save every particle of bone, is accused by the patient or the latter's friends of being ignorant of the art he practices, or, perhaps, grossly careless in the practice of it.

There is no class of injuries that yield better results under a conservative plan of treatment than these injuries of the hand, which, at first often apparently hopeless, later result most happily.

In treating injuries of the hand, there is one point in particular that demands consideration above all others—the future wage-earning capacity of the individual. There are instances in which the preservation of a single finger or even part of a finger decides the individual's future usefulness and happiness. A portion of the index finger that will enable him to grasp a pen, hold a pair of reins or some artisan's tools, decides the manner of his earning his livelihood. While it is true that a clean, smooth stump, remaining after an amputation at the wrist or of the phalanges, does not appeal to a jury as does a mutilated or deformed member, yet the future comfort and happiness of the patient should be alone considered, and the treatment conducted accordingly. For the past seven or eight years I have had oc-

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casion to attend the injured employes of a number of railways and manufacturing establishments, and during that time I have been called upon to attend accidents of every grade of severity, from the bruising of a finger-nail to the destruction of a major portion of the hand, and I am happy to say that I have had very few unpleasant results to record, and I believe that any such have been attributable to wilful neglect of the patient to follow my instructions.

With all becoming modesty I beg to say that many apparently hopeless cases have yielded the most gratifying results, under the plan of treatment to be mentioned hereafter—a plan that was finally adopted after extensive trial and observation. If in one or two cases the patient has been neglectful of his own welfare and has failed to follow instructions, and has for this reason passed into the hands of some unscrupulous individual whose desire to pose as a "surgeon" has led him to declare that all former treatment was radically wrong, the patient has himself to blame.

I repeat the statement that almost every case under my care has done well, and that all who continued the moist antiseptic plan of treatment have recovered with good results. Some cases will naturally require a different or special plan of treatment. To-day there are many who are grateful for the conservatism that saved for their comfort and future usefulness even a part of one finger on one hand; and here let me state further that I have absolute confidence in the time-honored saying of Verneuil, "Never to use a scalpel in an injury to the hand." There is no doubt that numberless fingers—and I might say, with all truth, hands—have been sacrificed by a blind adherence to the old teaching that we should go far enough beyond the point of injury to secure a good flap and then amputate. Such teaching was false and is being proven so daily.

I have repeatedly treated injuries to the hand in which the bone and the soft parts were mangled, apparently, beyond recovery, yet under moist antiseptic dressings they recovered with good function of nearly every joint and tendon.

To amputate with knife and bone-forceps, or perhaps the saw, under such circumstances, recalls to mind the statement of a certain "orificial" surgeon, that recovery from a simple case of catarrhal jaundice would depend entirely upon an operation which would have as its ultimate object the opening of the gall-bladder and removal of the concretions. Subsequent judicious hygienic and dietetic treament, faithfully carried out under the care of another physician (who happened to be a little more conservative), "saved the patient's life," and she is to-day doubly thankful for the conservatism that restored her health and spared her the risks of an entirely uncalled-for operation.

In spite of our plea for conservatism, it occurs to me that the public might be spared a great deal of suffering and imposition were all "gall-bladders" to be opened.

In every case of injury to the hand, nature will limit and define the degree of destruction to follow, and she will establish the line of demarcation that will separate and save the living from the dead tissue.

If the projecting piece of bone is on a level with or even a little above the fleshy parts, it has been my practice to leave it alone, and I have never regretted having done so. I have rarely done more than to snip off the sharpest points of the bone, trusting entirely to the blood clot and the granulation tissue to cover it.

I claim that all the amputating that need be done in an ordinary crushing injury of the fingers can be done with a good pair of scissors alone. I know that many will doubt this statement, but many others will uphold it. It is my opinion that too many physicians fail to recognize the necessity of building up the lacerated and torn tissues so that they will cover the end of the exposed bone without the latter in any way having been interfered with.

Ask any laboring man or artisan who has had a hand torn by machinery or crushed between the bumpers of a freight car, of how much value he considers the stumps of fingers you have saved for him. If I mistake not, his answer will be given in no uncertain terms. Every part of an inch is of untold value to him.

These contusions of the hand and fingers may be followed by decomposition within twenty-four hours after their receipt—a fact

that should always be borne in mind. This may result from an arrest of circulation, together with infiltration of the tissues with blood and lymph. Decomposition may be favored by hot weather, or possibly by some minute foreign particles that have not been removed. The pus so formed may induce inflammation and suppuration wherever it enters healthy tissue, and thus travel along the interspaces of the connective tissue and between the tendons. This fact would indicate the necessity for providing a free escape for all secretions by drainage, and to limit all infections by antiseptics.

The question of suturing is a disputed one; usually the contusion is extensive, and we cannot expect union by first intention, while the careful apposition of the edges may form pockets for the accumulation of separate matter. For this reason I never employ sutures, but trust to the bandage, carefully applied, to hold the parts in apposition. I frequently cut off the contused portions, if the wound be a small one, and unite the edges as in a simple incised wound. In slight contused wounds the dead tissue is disposed of by "molecular disintegration and absorption." A return of circulation to its normal condition, and formation of granulation tissue, also tend to destroy and absorb the dead tissue.

How should we deal with these wounds? First, wash them carefully and thoroughly in a corrosive sublimate solution or a 2-percent. carbolic acid solution; trim off all such tissue as appears dead or doomed to die. If necessary, place the hand on a suitable splint, providing for motion where necessary. Cover the hand with sublimate or iodoform gauze; and over all place a piece of rubber protective. This is all that need be done at the first dressing. Give your patient a bottle of antiseptic solution, telling him to keep the dressing moist all the time, applying the solution at frequent intervals. If he does not do this, the dressing becomes hard and dry, you have failed in your efforts, and the case will not result as you had reason to expect. Urge upon your patient the necessity of keeping the dressing moist all the time until granulation has been fully established. As a rule I use Listerine, glycerin, and water; I find that it fulfills all the indications, being antiseptic and at the same time stimulating and sedative. In certain cases I use the "Oakland" peroxide of hydrogen, glycerin, and water. But, in every case, I insist upon having the dressing kept actually moist. If upon the second dressing you find the lint adhering to the raw surface, your object has been defeated and the case will not do well.

It has been my custom to leave the dressing, after having been properly applied, and attended to by the patient, undisturbed until the second or third day. If sloughing occurs, the moist antiseptic dressings are continued until all dead tissue is removed and a healthy granulating surface established. This dressing is then changed for a dry one, preferably iodoform or iodol. Sometimes I have used a powder composed of fl. ext. calendula and boracic acid rubbed together until evaporated to dryness.

If, for any reason, decomposition and putrefaction have started, we will find the soft parts swollen and infiltrated, and symptoms of systemic infection. Amputation is not yet indicated, but treatment should be energetic. Open the wound freely, washing it with bichloride or carbolic solution; remove the mortified portions; puncture the infiltrated tissues at different points after Volkmann's plan, and then practice antiseptic irrigation.

The entire hand, wrist, and arm may be enveloped in gauze, and then placed on a splint, retained by light turns of a roller bandage; the arm is then suspended from some suitable support, or perhaps from the ceiling. A rubber blanket is arranged beneath the arm so as to catch all drippings and carry them to some vessel beside the bed. An irrigator filled with a sublimate or carbolic solution is then suspended near the bed, and the antiseptic solution is allowed to flow upon it in any quantity desired. The temperature of the irrigating lotion should be regulated according to the patient's comfort; I prefer it quite warm, and, for maintaining it at the temperature desired, employ gas or spirit lamps. In many instances this plan of treatment has saved a hand or foot. The dead tissue should be cut away daily, with the scissors or forceps. Even the most severely injured hands may often in this manner be brought from a swollen, shape-

less, suppurating mass into an organ that will be of great value to the patient after recovery.

The tendency of suppuration about finger-joints to terminate in ankylosis of the joint must not be forgotten.

Under this plan of moist antiseptic dressings, granulation is hastened and made certain, pain is greatly lessened, and suppuration, if not entirely prevented, is at least reduced to a minimum. It is my pleasure to cite a large number of cases which will show that this plan has proven a perfect success. There may have been, and perhaps will yet be, some failures, but they do not lie with nature, nor with the physician.

The physician cannot be too careful in dealing with these cases. The hand is peculiarly liable to take on phlegmonous inflammation. An amputation can be made at any moment if it be found necessary. A great many members can be saved and restored to usefulness by moist antiseptic dressings if these be used in conjunction with common sense.

The point of importance is, to encourage granulation and the formation of new tissue.

If every member apparently hopelessly injured were to be removed, there would be no credit attached to surgery at all.

I maintain that common sense on the part of the surgeon and patient will often accomplish a great deal more that is wonderful in the way of "true" surgery than that ordinarily denominated "brilliant" surgery.

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LANDMARKS OF GYNÆCOLOGY—ABORTION.

BY FRED. BYRON ROBINSON, B.S., M.D.*

The fourth landmark of gynæcology is *Abortion*. In other articles in the MEDICAL AGE I spoke of *Anatomy* as the first, *Menstruation* as the second, and *Labor* as the third landmark in gynæcology.

Abortion is the expulsion of a fœtus from the uterus before the fourth month (no doubt the fallopian tube aborts many embryos into the peritoneal cavity when conception occurs near the fimbriated end). To understand the evil effects of abortion, one must analyze the anatomy (structure) and physiology (function) of the organ called the uterus. This organ consists of two parts: (*a*) the uterus, and (*b*) the cervix. The function of the uterus is gestation and expulsion. The function of the cervix is protection. The cervix is a guard to the uterus; it is the faithful sentinel that wards off infectious matter from the uterus; it tells the uterus to quiet its troubled action. The cervix is the ante-room of a lodge where the guard strictly demands a password for entrance or exit. It does not share in gestation; it simply mechanically expands step by step with gestation, because the expanding uterus demands it. The cervix differs in structure from the uterus: (*a*) it has a different blood-supply; (*b*) it has a different nerve-supply—sober spinal nerves preponderate in it, while the sympathetic with its periodic rhythms predominates in the uterus; (*c*) its glands differ from the uterine; (*d*) its muscular substance is different. The cervix is generally still; the uterus is generally in a rhythm.

Now, an abortion is bad because it is unnatural, while a labor is natural. The cervix is never prepared for an abortion, while the uterus is always ready to start one.

From what has been said, it may be seen that the dangerous organ in abortion is the cervix. It is dangerous because it will not remain open. As soon as the fœtus is expelled, the cervix contracts and closes up the cavity. With a closed cervix, the tubes act as sewers, and the peritoneum as a sink-hole of infection. Now, the greatest principle in gynæcology is *drainage;* and abortions cannot have good drainage, as the cervical canal closes the sewer. Then gonorrhœal and various puerperal infections run riot. The woman does not have much, if any, flow—so she gets up and walks around, with her infectious enemy in close communion. Her extra exertions weaken her and bring more blood to the pelvis, which causes more secretions for the germs to thrive in, while the closed cervix allows no escape for the accumulating germs and secretions; these, taking the direction of least resistance, go through the fallopian tubes. The woman

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never recovers her elastic, juvenile step. It is common talk for a woman to say: "I have never been well since I had a miscarriage."

Now, I claim that, in those cases of abortion in which the woman is an invalid from pelvic disease year after year, the infection is gonorrhœa. In many cases it is the very gonorrhœa (endometritis) that caused the abortion. The gonorrhœa and spermatozoa were put into the woman's vagina at about the same time. Both progressed together until—physiology and pathology conflicted—abortion! Gestation progressed until the excessive rhythmical motion of the uterus conquered the cervix and opened it up.

Abortions frequently render a woman sterile. This is done by: (*a*) altering the tube so it will not transmit an ovum; (*b*) adhesions will not permit the fimbriated end of the tube to apply itself to the ovary; (*c*) the endometrium becomes so diseased that it will not gestate; (*d*) graafian follicles become so diseased that they will not be fructified. The ovary, I have noticed, after such infections becomes degenerated cystically. The whole story of sterility after abortion is: Infection, inflammation, adhesion, and degeneration.

The general practitioner's idea of abortion seems to be that of a man shaking an apple-tree. If a few apples fall off, there is nothing further to be done but to dispose of the apples. He seems to forget that the main damage is done *to the tree*.

Much is said about criminal abortions in this country. We only know of a criminal abortion because the woman became infected during the process. Many doctors perform abortions on women for *money* or *pity*. In almost every abortion that I have known of being produced, the woman had more or less infection. The men who do such work are generally rough and unskilled, and do not understand antiseptic or aseptic principles. I saw one case where the physician had torn the vagina and dragged some intestines out of it. He mistook the mesentery for the placenta. She died. Not far from where I lived, a woman thrust an instrument into the abdomen through the vagina, and died. Dr. Thomas reports a case where a woman passed a rib of an umbrella up through the vagina, and it went on through the diaphragm into the lungs; she died from the effects some time later. Even practicing physicians who criminally produce abortion do it very clumsily. A young woman of 24 came to my clinic at the Woman's Hospital; she had had an abortion produced on her by a neighboring physician, and he had actually lacerated the whole depth of the cervix for nearly three-fourths of an inch. A year after, she had a solid bunch of old adhesions on the left side—opposite the side of the laceration. It was presumably salpingitis and cystically degenerated ovary.

The line of pathological progress after an abortion is: (*a*) Endometritis; (*b*) *plus* endosalpingitis; (*c*) *plus* ovaritis; (*d*) *plus* peritonitis; (*e*) *plus* lymphangitis; and (*f*) *plus* phlebitis. Lymphangitis and phlebitis are rarer than endometritis *plus* salpingitis, *plus* ovaritis, and *plus* peritonitis.

I have seen in autopsy the connective tissue in the broad ligament as white as snow, but pyosalpinx existed. Another remarkable fact I wish to record is that I have seen double pyosalpinx with an endometrium which looked absolutely healthy. I have become convinced, of late years, that endosalpingitis in its worst forms can and does exist with a normal endometrium.

The statistics of abortion are very delusive, and so untrustworthy that they are not worth copying. Deaths from abortion are charged to different causes; but many occur, and many women are made invalids for life thereby. The Europeans call criminal abortion the American sin, while the American retorts by saying the European sin is illegitimate births. The American sin is the worse, for it causes a man to attack a defenseless babe which, cabined and confined in its narrow uterine quarters, is totally unable to defend itself. It is cowardly, beeause there is no bravery in killing innocent and harmless animals.

The *causes* of abortion are very various, and not always ascertainable or even understood. But we must look for the causes of abortion in: (*a*) the uterus (and mother); (*b*) in the fœtal membranes; and (*c*) in the fœtus itself. In accounting for abortions, one must not forget the patient's previous history. Some predisposing cause has no doubt

long existed. The cause of abortion often lies far ahead of the expulsion—the abortion is simply the effect of some old persistent cause. I found many abortions among women of an outdoor, active life, but I think that was due to trauma, for I noticed that as the seasons changed and these women began a new kind of work numerous abortions followed. I also noted that abortions from trauma or new and excessive bodily exertions passed over frequently with scarcely a trace of infection. One can easily note, in farm life, that, among women who suddenly begin to bind in the harvest field, many have an abortion in a few days (from trauma). Or let the season for digging potatoes arrive—when, especially in German communities, many women work in the field—and some abortions will follow.

The condition of the mother must be examined. I was once called to a woman in labor who had a very distinct attack of measles. When the child was born it was covered with a most intense measle rash. The mother's measles not only precipitated the labor, but infected the child with measles also. Acute infectious disease plays a rôle; also constitutional disease, excitement, or intense emotions (which means that the abdominal brain sends too great an irritation over the hypogastric plexus and creates excessive rhythm in the uterus). Among predisposing causes must be also mentioned the general spreading of catarrhal diseases. Endometritis accounts for many abortions; nor can we overlook diseased kidneys and heart as causative factors.

The fœtal envelopes play a rôle in abortions. The membranes are liable to diseases. The fine chorionic villi which project from the fœtal ball like fine hairs may enlarge to the size of a hazelnut and make the pathological condition known as hydatids of the chorion. Naturally the small chorionic membrane looks like a shaggy ball of wool. Its surface appears like the pile on velvet. But what a wonderful change occurs when all these fine villi of the chorion swell up and assume the appearance of a bunch of large transparent grapes! Several specimens of chorionic hydatids have been shown in Chicago lately. My friend Dr. Baily showed me a splendid specimen of these hydatids last month, taken from an abortion of four months. In Dr. Baily's case the chorionic villi were club-shaped; there were countless jelly-like transparent cysts covering the chorion. The contents of the hydatids were of a viscid nature. Many of the cysts had very small pedicles. I noted that the cysts were so numerous that the child could not get sufficient nourishment from the most diseased part of the chorion. In this way the normal chorionic villi were transformed into pathological villi (cysts), and the fœtus was starved to death. In degeneration of chorionic villi the fœtus is starved, and abortion results. In that part of the chorionic villi which persist and form the decidua serotina, or discordal placenta, of man, I have often found circumscribed patches of hard cicatricial tissue. The salts of calcium are deposited in such diseased points. Such spots may be found on the remains of old limited inflammations, and no doubt such localized inflammations frequently proceed to abortions.

The placenta may be so placed that as the uterus expands it will be torn from the uterine walls and thus cause hæmorrhage, followed by abortion. But it must not be forgotten that the placenta is not very firmly attached to the uterine wall, and slight trauma will often loosen it. I have examined scores of animals, and the wonder to me is how such a weak connection between uterus and placenta can last through gestation without a rupture. The pig's universal placenta peels from the uterine wall with very little pulling. Though the cotyledonous placenta of a cow is more strongly attached to the uterus, yet slight traction destroys the connection. Unnumbered abortions arise from the separation of the placenta from the uterus, from mere trauma, *e. g.*, a jog, a misstep, a rough ride, or an active walk.

The amnion may contain an excessive amount of fluid, and abortion result. Reports give as high as seven gallons. I saw a woman in Prof. Braun's clinic with such extensive hydramnios that life became endangered. Prof. Braun placed her under chloroform, dilated the uterus, and delivered her of twins—which he had previously diagnosed. It is probable she would have aborted in a few

days. The uterus may be so rapidly distended by hydramnios or chorionic hydatids as to quickly cause abortion. The amnion may contain too little fluid, and various inflammatory adhesions may result—the cord may adhere to any part of the body; the fingers may become adherent—and abortion follow.

So far as I can see, from the examination of scores of animals in pregnancy, and also from a practice of ten years, in which I have had quite a number of abortions among women, it seems to me that the death of the fœtus is the most frequent cause of abortion. Fœtal death becomes more impressive as a man examines gestation in its early stages in women, or in pigs and cows in the slaughter-house. It is a surprising matter that such a delicate thing as an ovum survives in an animal with such varied movements. The beginning fœtus is as soft as jelly, and its structures are as delicate as a spider's web. Active movements are apt to snap its delicate structures, and it will pass off in *solution*. I noted that great numbers of fœtal pigs, from ¼-inch to ¾-inch long, in the slaughter-house, died from *hæmorrhage*. The smaller the fœtus, the more apt it is to die of hæmorrhage. The hæmorrhage mostly occurred at the end of the umbilical cord or in the abdominal cavity. The little fellow was smothered by blood. Such hæmorrhages constitute a great causative factor in the death of young fœtuses. The hæmorrhages of women have floated many an embryo to an early grave, and even the matron or doctor is none the wiser. Of course, when the embryo dies from being smothered by blood, it becomes a foreign body and is then aborted.

Syphilis is another cause that kills the fœtus, and the result is abortion. This is no doubt the cause of habitual or recurring abortions. The fœtus acquires gummata in its viscera (liver, kidneys, spleen, etc.), and death ensues. The bones of a syphilitic fœtus are very distinct, and a post-mortem on a dead fœtus will tell a physician whether to treat the mother and father for syphilis. It should be remembered that long pre-existing causes should be sought for in abortion, especially in repeated abortions.

The fœtus may also die from any disease of its delicate viscera. I have seen intra-uterine peritonitis show very impressive changes at the autopsy. Under the causes of fœtal death would come the torsion of the cord to strangulation; abortion would follow it.

A curious feature I have witnessed many times in the lower animals is that after the death of the fœtus it is not immediately expelled, but *decomposes*, *mummifies*, or is transformed into *adipocere*. I have seen some similar things in women. The best explanation I can offer for such a retained fœtus is *tolerance* of the uterus; yet this is not a very satisfactory explanation. Such fœtuses will remain a very long time in the uterus. In the cases of mummification and adipocere the endometrium often appears healthy and normal. In the case of fœtal decomposition I have often found retained bones sunk deeply into the uterine wall, which was several times its natural thickness. Yet all such animals were fat and had been killed for butcher's meat. The blood-supply of the uterus became lessened, and the innervation centre did not act normally. In such cases in pigs the uterus would contract so firmly down on the mummified or adipocere pig that the uterus would appear node-like; a bulb-like swelling would appear where a fœtus lay, and between the fœtuses the uterus would contract to a circumference several times smaller than that of the bulb or fœtal node.

An important matter in abortion is to be aware of the *dangers* that it causes. I will place the dangers under a few heads.

The first danger of an abortion is *hæmorrhage*. I have seen many women almost bleed to death from abortion. I lost one from bleeding. And if they did not die from great loss of blood, they were ill for months from want of blood. They lost so much blood that what followed was—malnutrition, anæmia, and neurosis, a triumvirate in chronic female disease. So hæmorrhage must be controlled.

The second danger of abortion is *infection*. This infection may be followed by endometritis, salpingitis, ovaritis, partial peritonitis, lymphangitis, cellulitis, and phlebitis; the last five, from infection following abortion, are common diseases.

Then I have had fatal suppurative arthritis following labor.

I have also had fatal embolism following labor. Both arthritis and embolism may follow abortion.

A fifth danger may be the entrance of air into the veins.

Writers of complete works on abortion mention such things as tetanus and uterine hydatids following abortions, but I never saw such a case. I have seen puerperal mania, or melancholia, follow; but it was not very dangerous, except that suicide was attempted.

I have examined a large number of women who have had abortion, and what one finds on examination is the following: on introducing the finger into the vagina, an irregular, boggy swelling on one or both sides of the uterus. In my practice, the swelling has occurred seven times out of ten on the left side. The uterus may be normal in position or generally drawn more to one side than the other. This lateral boggy swelling of the pelvis is found between the uterus and the pelvic brim. After some experience one can usually distinguish the crooked, contorted, nodular tube and the ovary, in a mass of exudate. The more gently the examination is done, the more is discovered. This mass is generally up *toward the fundus;* hence it is probably tubal, and not cellulitis. One generally finds the pelvic peritoneum somewhat thickened on the diseased side. The disease lies mostly on the left side (seven in ten), on account of the dilatation and contraction of the rectum, and also on account of the venous current emptying at right-angles to the renal veins on the left side. The left plexus pampiniformis appeared to me to be larger than the right in nearly forty bodies dissected. If the boggy swelling in the pelvis appears within two weeks after the abortion, and is as large as an egg, it is likely a cellulitic and not a tubal abscess, as tubal abscess of that size occurs much later.

Women with these pelvic swellings generally have painful menstruation. They have crooked, contorted, and convoluted tubes. From the crooked tubes they have premenstrual pain, or tubal colic, because the diseased tube, hampered by pathological conditions, cannot go through its peristalsis. I have noted that those women have much pain because the *rough*, untutored gynæcological finger has actually irritated the tubes into peristaltic movements; such pain will often last two hours.

Large experience enables one to learn much from *resistance* in pelvic examinations. I perceived that Mr. Tait diagnosed much by the resistance he felt in the pelvic examination. But the young gynæcologist should place the woman on her back, with thighs flexed on the abdomen, and then proceed *gently* and *slowly* with the bimanual pelvic examination. He should examine systematically every region of the pelvis. Though practical gynæcology is hard to learn, because of the lack of teaching clinics for digital examinations, yet much can be learned from a single cadaver in a couple of weeks.

The *treatment* of abortions may be summed up in the following:

1. Rest.
2. Drainage.

If one is called to see a woman who considers herself pregnant and has symptoms of aborting, he must satisfy himself by examination on these four points: (1) Has she had *hæmorrhage* from the vagina? (2) Has she had pelvic *pain?* (3) Has she had *vomiting?* (4) Is the *os dilated?*

Hæmorrhage from the vagina is nothing but a symptom, and may pass over. Pain is very delusive, and but little reliance can be placed upon it. Vomiting is of a more suggestive character, because it probably comes from profound disturbance in the ganglia in the uterus; this irritation is carried up to the abdominal brain, where the irritating force is reorganized and then reflected on to the stomach by way of the gastric plexus, and vomiting results. Now, a sign is a distinct clew to a disease; a symptom is only an indication of a pathological condition; hence we say hæmorrhage, pain, and vomiting are mere symptoms. However, if they are combined, *i. e.*, occur together, the presumption is strongly in favor of abortion being present.

But the *dilatation of the os* is the *sign* of abortion; when the os is dilated, the uterine contents are pretty sure to abort sooner or

later. Hence digital examination of the os is the only real clew to the condition of the uterus. Under ordinary circumstances, if a woman aborts (traumatism being excluded), it will be close to the climax of a menstrual period. The first thing to do is to put the woman to bed and insist on her remaining there. Very frequently, when the physician arrives the fœtus has passed. But the placenta is still in the uterus. Right here arise two classes of gynæcologists: one class would let it alone—leave it to nature; the other class would remove it. It is very difficult to decide which course to pursue in each case. Only years of experience will enable a physician to judge for himself. I would say this much from my experience: if one can remove the placental remains aseptically, it is the wisest plan; but if there is any doubt, it is better to leave them alone. Remember that when a woman has a child without having been subjected to digital examinations, she is pretty sure to escape puerperal fever—I have never seen puerperal fever in such a case.

The midwife and the doctor carry puerperal fever. But we will take a case: Dr. A. is called to Mrs. B., who is aborting. What shall he do? If the pulse and temperature remain normal, he had better let her alone in the bed, and do nothing, and expect. If fever arises, the best way is to put Mrs. B. to sleep and lift her on a table; then clean out the vagina with $HgCl_2$ 1:1000. Now seize the anterior lip of the cervix with a volsela and draw it down, introduce a dilator, and in *not less than* five minutes dilate the os. Be sure to dilate slowly. Introduce the finger and break up some of the placental adhesions. It is possible that a forceps will be required to draw out the fœtus, but the whole thing soon rolls out. Now curette every corner of the uterus, using a dull instrument. The uterus should then be irrigated with hot water, and this will soon make it contract down. After it is thoroughly clean, pass some well-boiled gauze to the fundus, pack the vagina with it, and put the patient to bed. The gauze can be removed in from two to four days. If it be done aseptically, the woman is safe 97 times in 100.

The indications for this kind of treatment in cases of abortion are: (1) High temperature and pulse. (2) Hæmorrhage. (3) Retained placenta.

I have also treated many women expectantly. If the fœtus was passed before I arrived, and some placenta remained, I have many a time left them to nature, and they recovered. I will say that, though a man be never so clean, at an abortion where the patient is infected with gonorrhœa she may yet have a distinct exacerbation of her tubal and pelvic trouble, because the active process of parturition has induced the germs by active feeding to thrive faster and invade new fields through new lesions. One must be just as clean at an abortion as at a laparotomy.

The gynæcologist, when called to a case of abortion with a general practitioner, will likely want to empty and curette the uterus; and that is often what the practitioner will oppose—he thinks the gynæcologist wants to do too much and show too much "skill" to the family. The general practitioner will often say: "Let her alone; give her a physic and a little medicine, and she will be all right." But one must not allow high pulse and temperature after an abortion to go by without *immediate* invasion of the uterus. The thing to find out, on a visit to a woman who has aborted, is, the amount of temperature she has. The pulse is not so good a symptom, as she may have a high pulse from large losses of blood. The only safe place to take the temperature is in the rectum. High temperature means infection, and every means should be used to stop it.

Another feature arises in abortion. One is called to a woman aborting, but the event is only known to be surely coming from os-dilatation. She is losing some blood, but the expulsion will not occur for many hours yet, and you are afraid she may lose too much blood in your absence. In such a case the whole vagina should be well packed with cotton balls (well boiled) dipped in a 4-per-cent. solution of boracic acid. This will prevent serious hæmorrhage, but will allow the uterus to expel its contents. After 10 to 20 hours the cotton balls can be removed, and likely the fœtus will be in the os or vagina.

Drugs are not of great service in abortions.

Ergot would not aid a very great deal in expelling a small piece of retained placenta, and it only acts temporarily.

To properly treat all cases of abortion requires all the skill a man can command.

In discussing abortion (the fourth landmark of gynæcology), I have not attempted to be at all systematic, but have rather dotted down rambling remarks on the subject.

Chicago, Ill., 34 Washington St., Venetian Bldg.

NUTRIENTS IN CANCER AND CONSUMPTION

BY ANDREW WILSON, M.D.*

It is of the utmost importance that medical men should have at their command foods which are of real use when injected into the lower end of the bowel. This mode of procedure is absolutely necessary in certain conditions when the digestive system is so disorganized that the food will not remain "down," or when cancer or other obstruction prevents its passage into the stomach. And it is obvious that if the lower section of the intestine is to be used to nourish a patient, the food injected into it must be soluble and already acted on by digestive ferments.

We have received a preparation, Mosquera's Beef Jelly, which has just been introduced from America. From the analyses of various eminent chemists, we see that it contains about four times the amount of nourishment to be obtained from an equal weight of lean beef, and that its especial nutritive value lies in the fact that it is perfectly soluble, having been treated with a digestive ferment occurring in the fresh juice of the pineapple. Other partly digested foods have been treated with the ferment scraped from the stomach wall of the pig or calf; this renders them largely unavailable. Mosquera's Beef Jelly makes a most palatable beef tea or bouillon, which is extremely nutritious and very easy of digestion. In this form it is invaluable in the treatment of consumption, inflammation of the lungs, pleurisy, and a host of other diseases in the treatment of which all our resources are taxed to the utmost to maintain the strength with the least possible strain on the digestion.

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ANOTHER VIEW OF LADY BICYCLISTS.

I would like to ask Dr. Williams, of Bay City, how many lady riders of bicycles he has examined for uterine troubles. His article in THE AGE of Sept. 10th sounds very much like the opinion of a man who never rode a wheel. In many respects I agree with the Doctor—in all, in fact, except the alleged injurious effects or the immodesty of bicyle-riding by ladies. All writers agree that horseback exercise is beneficial, but he who does any riding at all knows that a ten or twenty-mile ride on horseback leaves the perineal region so battered, bruised, and sensitive that walking for days is attended with discomfort. It cannot be disputed—because thousands upon thousands of riders demonstrate it to be true—that a ride of from fifty to seventy-five miles may be made upon a first-class pneumatic-tired wheel at an average speed of nine or ten miles per hour over gravel turnpikes, without any soreness or stiffness of muscles or joints which a sponge bath and ten minutes' rest will not completely relieve. I am not speaking of athletes, but of any man in good health and fair strength; and I do not believe that a twenty- or thirty-mile ride on a good road, with a good wheel, ever injured any woman. I do not believe in Century-riding for women, nor in women coasting Pike's Peak, any more than I believe our brother in the sandy regions of Bay City ever examined vaginally enough lady cyclists to warrant his opinion.

Of course, brazenness in women is always disgusting; but I do deny that a lady on the silent, swift-moving wheel is as conspicuous as mounted on the clattering and often unmanageable horse. No lady should undertake a public appearance until her wheel is manageable. So far as Bishop Coxe is concerned, he is one of those eminent divines who two centuries ago would have burned at the stake those same witches for their ungodly and unseemly riding of broomsticks in the dark of the moon.

W. H. PETERS, M.D., M.S., *etc.*

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Editorial.

AN IMPOSTOR.

A clever impostor, with many assumed names, is traveling over the country victimizing physicians by falsely pretending to represent certain journal publishers, collecting money in advance, and appropriating it.

Some of the various *noms de plume* he has adopted are: Charles A. Hollie, agent of the St. Louis Medical and Library Association; D. J. Bigger, representing Law and Medical Exchange, 91 and 93 Fifth avenue, Chicago; S. Drake Marshall, agent for R. S. Peale, Chicago publisher.

This sharper is described as being about five feet nine inches in height, 160 pounds in weight, red moustache, sandy hair, and pleasant address.

He has been heard of in Missouri, Arkansas, Illinois, Minnesota, and Ohio.

On investigation as to his representations it has been ascertained that they were all false.

We would, therefore, especially caution physicians to require all solicitors who purport to represent our journals to produce evidence of their authority; for our agents, one and all, are qualified by credentials that cannot be misunderstood. Further, we invite correspondence by telegraph, at our expense, when there is any question or doubt as to the authority of the individual.

A NATIONAL SECRETARY OF PUBLIC HEALTH.

All will agree that no more important interest could be conceived of as entitled to national representation than the health of the public.

It did not need the fear of a cholera epidemic to incite sanitarians and physicians to suggest the appointment of a national health officer. Some time ago a bill was introduced in the Senate providing for the establishment of a Department of Public Health under the charge of a medical officer, to be appointed from civil life by the President; this Department to obtain from consular officers at foreign ports all available information in regard to the sanitary condition of such ports and places, and also all information accessible from State and municipal authorities of the sanitary condition of places in the United States; all the information gathered to be embodied in the form of a bulletin, and transmitted weekly to the marine hospital service, collectors of customs, and to State and municipal health officers; the Department to also procure and tabulate statistics relating to marriages, births, deaths, the existence of epidemic diseases, and all information relating to climatic and other conditions affecting public health, and to co-operate with State boards of health, the signal service, the medical department of the army, and other branches of the Government, utilizing the results so as to make the new department a repository of knowledge for the protection of health and the prevention and extermination of disease.

This bill will be considered at the next session of the Senate, and public opinion will demand of its senatorial representatives active support of so popular and necessary an officer as a National Secretary of Public Health.

The recent active investigation of the facilities of existing sanitary stations showed clearly that many were sadly lacking in adequate equipment for the examination, isolation, and disinfection of suspected carriers of infection.

What nobler mission for a cabinet officer than to devote himself, with the aid of proper appropriations, to completing and perfecting such a thorough system as to make a general epidemic of cholera or other infectious disease impossible?

As Secretary Noble justly says: "Liberal as the medical profession is, and has in our country proved itself at all times to be, it is not fair or politic for us to leave it unsup-

ported and nationally unrecognized. The international communication of intelligence that would follow the organization of a Bureau of Public Health would not only preserve our own inhabitants from many physical ills, but would greatly serve to strengthen the sympathy between all civilized peoples who would correspond and co-operate with us. They would feel the same beneficent influences of the system we would realize. The subject is worthy of statesmanlike treatment, and should not longer be subordinated to our other material interests."

The time is an opportune one for doctors to use what influence they can bring to bear to agitate this subject and influence legislative opinion in favor of this proposed reform. Its consummation is devoutly to be wished.

THE TREATMENT OF ALCOHOLISM.

Dr. J. E. Usher, of Melbourne, recently brought out an interesting book on "Alcoholism and Its Treatment," published by Ballière, Tindall & Cox, London. He does not believe in any sovereign specific. A necessary preliminary is to deprive the patient of alcohol. The temperamental peculiarities must be taken into considèration, and coexistent morbid tendencies and conditions combated and neutralized. Such will-power as the patient possesses should be strengthened and encouraged. Harshness, threats, and abstraction of sympathy are all out of place in such cases.

Dr. Usher's treatment consists in the administration, during four or five days, of a mixture containing nux vomica; sedatives, such as bromide of potassium, chloralamide, or paraldehyde, being given at night if the patient suffers from sleeplessness. The best hypnotic, in Dr. Usher's opinion, is hyoscine given hypodermatically in doses ranging from $\frac{1}{150}$ grain to $\frac{1}{100}$ grain. If absolutely necessary, one ounce of whiskey or brandy daily may be allowed, but not for a longer period than seven days.

After the fifth day a mixture containing manganese and chloride of gold and sodium —why chloride of gold?—with the addition of strychnine if indicated, is given for two or three weeks. Iron is given when a tonic is required, and euonymin with pepsin is naturally found useful when hepatic symptoms are prominent.

Our author has also tried, with good results, the hypodermatic injections of nitrate of strychnine on which Prof. Portougaloff and other practitioners in Russia, Germany, France, Italy, and elsewhere pin their faith, in alternation or combination with belladonna, and which is alleged to be the active agent in various secret and "institutional" treatments. Portougaloff has treated more than five hundred cases of chronic alcoholism by this method, with, he alleges, almost invariable success. Some of the patients relapse from time to time, but, to quote the Professor's own words, "a repetition of the treatment invariably sets them right for another year."

Dr. Weir-Mitchell and Dr. J. Da Costa, of Philadelphia, Dr. Bovee of Washington, Dr. J. G. Jewell of San Francisco, and Dr. Edmund Andrews of Chicago, also make strychnine injections the sheet anchor of their treatment of alcoholism.

Dr. Branthwaite, the resident physician of the Dalrymple Home in London, has also used strychnine in combination with other remedies in a number of cases, with excellent results.

Dr. J. L. Gray, of La Porte, Ind., gives chloride of gold and sodium with nitrate of strychnine and a small quantity of atropia internally, and also injects gold and strychnine under the skin. The patients are seen four times a day, and the gold and strychnine are rapidly increased until the limits of tolerance are reached. Whiskey is given in carefully regulated doses. The treatment lasts from three to six weeks. Dr. Gray has treated more than two hundred cases in this manner, and believes that about 70 per cent. are cured.

Dr. T. D. Crothers is of opinion that cocaine, atropine, morphine, and strychnine may neutralize the alcoholic tendency, but that a tendency to cerebral hæmorrhage and heart failure often follows these methods of treatment. In many cases he has found that the tinctures of iron and cinchona appease the craving for drink. He treats alcoholism on general principles, without relying on any supposed specific. He has had more than

three thousand cases under his care, with a proportion of cures, after periods of from ten to fifteen years, averaging between 30 and 40 per cent.

From all this it will be seen that the treatment of inebriety by drugs—though still, it may be supposed, in its infancy—has already proved its title to a place in legitimate medicine. In dealing with this disease, two points have to be aimed at: first, the breaking of the vicious habit; and secondly, the neutralization of the immediate evil effects that may follow the deprivation of the accustomed stimulus. The former object is only to be attained by a determined effort of the patient's own will, aided, if need be, by *force majeure* in one shape or another; but drugs may be of service even here by causing symptoms which interfere with the patient's enjoyment of his noxious pleasure—in other words, by making him so ill in other ways that alcohol loses its charm for the time.

It may perhaps be admitted that this is a legitimate method of treatment if it can be carried out without danger—that is to say, if the remedy is not as harmful as the disease. One of the objectionable features of more than one of the secret treatments, however, is that highly dangerous drugs, such as atropine, seem to be used for the purpose in a way likely to be most injurious to the patient's health. As regards the second point mentioned above, the use of strychnine as a substitute for the alcoholic stimulant to which the nervous system has become accustomed has a perfectly rational therapeutic basis; but here also the drug must be used with the utmost circumspection.

PAN-AMERICAN MEDICAL CONGRESS NEWS

The Committee on Organization of the Pan-American Medical Congress will issue the preliminary announcement of the congress within a few weeks. This announcement of the congress will show that the organization has been perfected in almost every colony and country of the western hemisphere. The local medical societies in each of the constituent countries are made auxiliary to the congress, which will be held in Washington, D. C., September 5, 6, 7, and 8, 1893.

Dr. Charles A. L. Reed, of Cincinnati, Secretary-General of the Congress and Chairman of the Committee on Organization, announces that after extended correspondence between himself and Dr. Maragliana, of Genoa, General Secretary of the International Congress, the date of the Rome meeting has been finally and definitely set for September 24th of next year. This gives an interval of sixteen days between the Washington and Rome meetings, during which time an easy trip can be made from the former to the latter city. It is possible that a steamer may be chartered direct from New York to Rome.

DINING IN ITS SOCIAL AND SCIENTIFIC ASPECTS.

The Lancet, in commenting on an article on "The Art of Dining," in the August number of the Nineteenth Century, moralizes on the effect of food on character.

The article contains many hints not only interesting from the social point of view, but also important dietetically. The proper choice, preparation, and serving of food is not a matter to be handed over to epicureans or gluttons, or to be regarded as merely interesting from the æsthetic and gastronomic points of view. It is in reality a question of the very first magnitude, touching the public health in one direction, the public purse in another, and not indirectly affecting the well-being and happiness of every class and every individual. National food customs on the one hand reflect, and on the other to a material degree influence, national character. They are the growth of ages, and are largely affected by questions of race and climate; hence sudden and thoroughgoing reforms are not to be expected, and are hardly desirable. Still it is wholesome to have our failings in this regard indicated, and to have lines of amendment and development pointed out.

The burden of the article treats mainly of the formal or elaborate dinner, and finds much to condemn in the profuse and ostentatious style now widely prevailing. The author is for simplicity, and lays down as sufficient for all purposes the following *menu:* A soup, a piece of fish, a *relevé*, an *entrée*, a roast bird,

an *entremet de légume*, a sweet *entremet*, a savory morsel and dessert. The important point in this arrangement is the place of the *relevé* after the fish and before the *entrée*.

The current craze for making things look pretty is deplored. "We have become the victims of a decorative mania. . . . The use of fancy colors, without consideration of their congruity, for the sake of prettiness, to tint the maskings used in savory cookery, is surely preposterous; for how in the natural order of things can a fillet of fish be green or a cutlet of chicken pink? . . . Who can see, without pity, in the window of some fashionable culinary professor a noble salmon that never did anyone an intentional injury put in the pillory and exhibited as a peepshow to the passer-by, with his back bristling with prawns like the 'fretful porcupine,' crayfish disporting themselves about him, his sides outraged by a gruesome tattooing of truffles and divers devices in patterns like a Maori masher, and, lastly, to complete the atrocity, an impalement of hideous 'hatchet' skewers? Surely this is as bad as the desecration of 'dead Hector' with the garish bedizenment of a circus clown."

Perhaps the most revolutionary point in the article in question is the suggestion that the modern dinner should be brought to an end within an hour. This would, indeed, be a relief, but it seems too much to hope for. For the purpose of expediting the progress of the dinner, the writer suggests that the various component parts of the meal should be served ready-helped from the buffet. He also recommends the abolition of the service of cheese. There are many other points in the article which invite attention.

Truly, "we are what we eat," and it behooves the doctor exposed to the danger of contagion, and with broken rest, to so eat as to fortify himself for his arduous labor.

When exposed the physician should take some concentrated, easily assimilable nutrient.

A hot bouillon may be instantaneously prepared by dissolving in a cup of hot water a teaspoonful of Mosquera's Beef Jelly.

Book Notices.

A Practical Treatise on Diseases of the Skin. By John V. Shoemaker, A. M., M. D., Professor of Skin and Venereal Diseases in the Philadelphia Medico-Chirurgical College and Hospital, etc. Second edition, revised and enlarged, with chromogravure plates and other illustrations. Pages 878. Cloth, $5.00; sheep, $6.00. Published by D. Appleton & Co., New York.

A second edition of this work being demanded, the author has taken the opportunity of incorporating in it various new points relative to ætiology, pathology, and treatment which have been brought forward since the first edition was issued. Many memoirs and valuable text-books have appeared within that time, and their pages have been carefully consulted with the view of making this volume useful to the reader and a faithful representation of the present knowledge of dermatology.

Interesting facts pertaining to the clinical history of different affections have been added, and the object has been kept in view to describe the maladies of the skin in their relation to the general state of the economy.

The results of the cultivation of bacteriology have, in several instances, given precision to our views concerning ætiology. Brief descriptions have been given of those micro-organisms which have been demonstrated to be exciting causes of certain cutaneous maladies.

The effect of local and general antisepsis is briefly discussed in the introductory chapter upon treatment in Part I. The most efficient bactericides, and their influence in various morbid conditions, are described in the same portion of the book, while the details of their application are given in a consideration of the various diseases in which they are applicable.

A special section has been added upon electricity, in which the value of this agent is discussed in the treatment of many diseases of the skin. The effect of diet in the production and treatment of cutaneous affections is also alluded to at some length. Attention is given to improved methods in the treatment of the eruptive fevers. Many additions have been made to the chapter on syphilis; a full account has been given of the various methods of hypodermatic medi-

cation that have been advocated in this disease, together with an estimate of their advantages and defects.

A section has been added descriptive of the various changes which the nails undergo in consequence of local or general disease.

The recent literature upon the subject of leprosy has been surveyed, and the opposing doctrines concerning its contagious and hereditary character patiently considered. Upon these subjects, however, the writer has seen no reason for changing the opinions advanced in the first edition.

The constitutional effects of carcinoma are briefly described. An account has been given of the recent literature of the ætiology of cancer in connection with the views advanced by Darier and others upon the subject of cutaneous psorospermosis.

The pathogenesis of lupus vulgaris, and its relation to other forms of cutaneous tuberculosis, receive due attention. The results of the treatment of lupus by "tuberculin" are described in accordance with the experience of the author in the use of this remedy.

A number of additional valuable formulas have been embodied in the work, illustrative of the therapeutic methods of various authorities at home and abroad.

Naphey's Modern Therapeutics. In two handsome volumes of 1,000 pages each. Vol. I: General Medicine and Diseases of Children. Vol. II: General Surgery, Obstetrics, and Diseases of Women. Ninth edition, revised and enlarged. Edited by Allen J. Smith, M.D. (Assistant Demonstrator of Morbid Anatomy and Pathological Histology, Lecturer on Urinology, University of Pennsylvania; Physician in the Dispensary for Diseases of Children, University Hospital, etc.) and J. Aubrey Davis, M.D. (Assistant Demonstrator of Obstetrics, University of Pennsylvania; Assistant Physician to Home for Crippled Children, Philadelphia). Royal octavo. Half Russia, marbled edges; $6.00 per volume, net. Each volume sold separately. P. Blakiston, Son & Co., Publishers, 1012 Walnut St., Philadelphia. 1892.

The first volume of this the ninth edition of Naphey's popular work has been rearranged, re-edited, and very much improved, about one-fourth of the text being new. It gives 1,034 pages to the elucidation of general medicine and the diseases of children.

The large sale of this work indicates its utility. It is conveniently arranged for reference, and contains the views of the most distinguished authors. It is a library of the concensus of opinion of those best able to adequately voice the modern methods of therapeutics. It is a practical and pre-eminently helpful compendium, and the publishers are to be congratulated for bringing out such a creditable edition.

A Manual of Organic Materia Medica: Being a Guide to Materia Medica of the Vegetable and Animal Kingdoms. For the use of Students, Druggists, Pharmacists, and Physicians. By John M. Maisch, Ph.D., Professor of Materia Medica and Botany in the Philadelphia College of Pharmacy. New (fifth) edition, thoroughly revised. In one very handsome 12mo. volume of 544 pages, with 270 engravings. Cloth, $3.00. Philadelphia: Lea Brothers & Co. 1892.

The manual of Professor Maisch keeps pace with the times, and each successive edition has incorporated the necessary changes required by progress in materia medica and its allied branches.

The changes made in this edition, beyond the recent observations and investigations, are that the pronunciation of the systematic names of plants and animals has been indicated by marks of accent; the text has been carefully revised, and a number of new illustrations prepared; the pharmacopœial drugs have been more conspicuously distinguished by the selection of smaller type for those articles which are not recognized by the Pharmacopœia or which at present are rarely met with in commerce. Those drugs which bear a close resemblance to official ones or are the sources of proximate principles are admitted into the Pharmacopœia as important remedies.

Principles of Theoretical Chemistry, with Special Reference to the Constitution of Chemical Compounds. By Ira Remsen, M.D., Ph.D., Professor of Chemistry in the Johns Hopkins University, Baltimore. Fourth and thoroughly revised edition. In one handsome royal 12mo. volume of 325 pages. Cloth, $2.00. Just ready. Philadelphia: Lea Brothers & Co. 1892.

This is designed as a brief treatise on chemistry to help students get clear ideas in regard to the foundations of that science. A short chapter on solutions has been added.

Notes and News.

The American Electro-Therapeutic Association.—

A very full programme is announced for the coming meeting of the American Electro-Therapeutic Association which is to be held in New York, at the Academy of Medicine, 17 West 43d street, October 4th, 5th, and 6th.

There will be two interesting discussions —one upon "The Relative Fœticidal Value of the Different Currents, and their Application to Ectopic Gestation," to be discussed by many prominent gynæcologists and electricians; and another upon "Cataphoresis and its Practical Application as a Therapeutic Measure."

Papers are announced by Drs. Geo. J. Engleman, Wellington Adams, and Geo. F. Hulbert, of St. Louis; Wm. F. Hutchinson, of Providence, R. I.; Franklin H. Martin, of Chicago, Ill.; A. Lapthorn Smith, of Montreal, Canada; R. J. Nunn, of Savannah, Ga.; Thomas W. Poole, of Lindsay, Ontario; C. Eugene Riggs, of St. Paul; W. J. Herdman, of Ann Arbor, Mich.; D. S. Campbell, of Detroit, Mich.; G. Betton Massey, of Philadelphia; Henry D. Fry, of Washington, D. C.; H. E. Hayd, of Buffalo, N. Y.; J. H. Kellog, of Battle Creek, Mich.; C. G. Cannaday, of Roanoke, Va.; Ernest Wende, of Buffalo, N. Y.; Wm. J. Morton, Augustin H. Goelet, A. D. Rockwell, Landon Carter Gray, Robert Newman, Ephraim Cutter, Frederick Peterson, G. M. Hammond, F. Van Raitz, of New York; and many others. Dr. J. Mount Bleyer will give an instructive lecture, with demonstrations, entitled "The Phonograph and Microphonograph, the Principles underlying them, and their Uses in the Sciences."

In connection with the meeting, there will be an exhibition of modern medical electrical apparatus, all the prominent manufacturers being represented.

The social part of the programme includes many pleasant surprises.

Colonization of Epileptics.—

This subject has been brought to the attention of the medical profession by an address made before the State Board of Charities, at Albany, N. Y., by Dr. Frederick Peterson, in which he outlined a plan for an epileptic colony. Although this idea is by no means a new one, yet Dr. Peterson demonstrates in detail what such a colony system should be. As the State of New York has passed the law appointing a commission, not only to select a site and to prepare plans for an epileptic institution, but also to prepare these plans on a colony system, the matter assumes immediate practical importance. In the first place, Dr. Peterson believes that all ideas of an "institution" must be lost sight of; on the other hand, it should be rather of the appearance of a small village, in which there should be no very large buildings. Dr. Peterson outlines in detail the arrangement of the various occupations which could be taught to advantage, but suggests that it should grow by a sort of evolution, its wants being supplied as they become manifest.

The evolution of this colony, as outlined by Dr. Peterson, by the New York Commission, will be watched with great interest. Its success will mark a great era in the combination of medical and economic elements.—*University Medical Magazine*, Sept., 1892.

Mississippi Valley Medical Association.—

This Association will hold its eighteenth annual session at Cincinnati, Wednesday, Thursday, and Friday, October 12, 13, and 14, 1892. The programme is a valuable one, containing many of the most prominent names in the profession our country affords. It covers every department in medicine. Not only the scientific, but also the social, part of the meeting will be of the highest order. The interest of the convention will be augmented by the meeting of the gentlemen interested in the Pan-American Medical Congress, also other bodies of medical men. Dr. Benjamin Ward Richardson has written his earnest desire to be present. The Association will be just in time and just in line for many of the gentlemen *en route* for the American Public Health Association in the City of Mexico. Among the many prominent gentlemen who are expected to read are the following: Dr. Hunter McGuire, Richmond, Va., President of the American Medical Association—the address on Surgery; Dr. Hobart Amory Hare, Professor of Materia Medica, Jefferson Medical College, Philadelphia—the ad-

dress on Medicine. C. A. L. Reed, M. D., President, Cincinnati; E. S. McKee, M. D., Secretary, Cincinnati.

Twice Too Many Doctors in the United States.—

Up to the present time the number of medical colleges has increased out of all proportion to the increase of population. Of 130 schools, less than a dozen are endowed. The number of practitioners is greatly in excess of the legitimate demands of the people. We are reliably informed that in the decade ending with the year 1890 the colleges of the United States matriculated 115,355 students, and graduated 39,996. This is an average of 4,000 yearly—in my opinion more than twice as many as the requirements of the people demand. As a final argument in behalf of adequate medical legislation, I beg to submit the following statistics, based upon the proportion of physicians to the inhabitants in a few of the European countries:

Sweden	1 to 7,000
Italy	1 to 3,500
Germany	1 to 3,000
Austria-Hungary	1 to 2,400
France	1 to 2,000
United States	1 to 600

—Dr. Millard, in *Medical News.*

A Dog Hospital and Clinic.—

A dog hospital and dog clinic are to be established in connection with the University of Pennsylvania. We learn that "On the first floor the commodious clinic-room will open into the largest apartment, that for the non-contagious cases. At either side of the latter will be the mange and the distemper wards, both being separated from the clinic-room by heavy brick partitions, communication with all other parts of the building from these wards being effected only by going outside and around."—*Medical Record.*

The Ontario Medical Journal.—

This is the name of a new medical monthly published in Toronto, under the editorial charge of Dr. Orr. It is to be the official organ of the "College of Physicians and Surgeons of Ontario" (a society of physicians in the Province of Ontario), and will publish the transactions of that society.

Therapeutic Brevities.

Treatment of Asthma.—W. Jones (Therapeutic Gazette, July, 1892) records the results of treatment of 23 cases of asthma. The cases were under observation for two years after discontinuing treatment; 19 recovered, 2 were markedly improved, and 2 derived no benefit. Their ages ranged from 18 to 50. Duration of disease, from two to eighteen years. Cases 1 to 6 presented exostoses springing from the nasal septum and pressing on the middle turbinated bone; these were removed, with the result that the asthma was quite relieved. Case 7 had great hypertrophy of both middle turbinated bones; destruction of these by the galvano-cautery quite cured the asthma. Cases 8 to 14 were all cured by destroying hypertrophy of the turbinated bones. In Cases 15 and 16, removal of nasal polypi produced the same effect. Cases 17, 18, and 19 were due to deviated septum; the septum was in each case straightened—in one case it remained straight and the asthma disappeared, in the other two the operation failed. Cases 20 and 21 had asthma with atrophic rhinitis and areas of hyperæmia on the middle turbinated bones; treatment by cauterization with chromic acid was successful. Cases 22 and 23 also had atrophic rhinitis; cauterization in these cases, however, only intensified the trouble. The cases are held to show that in all cases of asthma attention should be given to the nose. Nasal operations were frequently curative, and duration of the asthma did not seem to affect the prognosis.

Formula to Prevent Sea-sickness.—The British Medical Journal has recently contained letters from some of the leading physicians, including Grailey Hewitt, Robert Barnes, and Prof. Chartiris, on their professional experience in sea-sickness. Prof. Chartiris calls the attention of the medical profession to a combination which he calls "chlorobrom," containing to each dose thirty grains of chloralamide, the same of potassium bromide, in an ounce of menstruum. The patient is recommended to move the bowels before starting, and before getting into rough water take the mixture; sound sleep occurs, and when he awakes he is all right for the rest of the voyage. At the least, this has been the experience of those who have used the remedy. Prof. Chartiris says: "This solution is absolutely safe and harmless, and produces refreshing sleep without any baneful after-effects. When

judiciously administered it prevents, and in all cases alleviates, sea-sickness. The effects of the drug may be expected to begin in from thirty to ninety minutes after dosage: and the duration of sleep thus induced will be from five to eight hours. The quality of sleep is said to be refreshing, natural, and devoid of disagreeable sequels, in nearly all cases."

The Diseases and Conditions to which the Rest Treatment is Adapted.—Dr. Wharton Sinkler prefaces his paper with an excellent *résumé* of the rest treatment. The most satisfactory results are usually obtained in hysteria and neurasthenia. In locomotor ataxia much good has followed prolonged rest; by this method spastic paraplegia has been benefited. Neuralgias, as sciatica, neuritis, peripheral neuritis, and migraine, all are conditions likely to improve. Mental diseases when dependent upon malnutrition, and the nervous exhaustion of melancholia and mania are apt to be benefited, although open-air exercise in addition may be desirable. Chorea and epilepsy may be improved, but in the latter instance it is not likely to be permanent. Alcoholism and the opium habit have been successfully treated. Uterine diseases yield, sometimes, as readily as to operative interference. Albuminuria and lithæmia, particularly when the latter gives rise to migraine and neuralgias and certain forms of neurasthenia, are markedly improved. Grave's disease is much benefited, absolute rest being the most effective means of quieting the heart's action.—*Journal of Mental and Nervous Diseases*, 1892, No. 5, p. 321.

Treatment of Cystitis.—Otis (Journal of Cutaneous and Genito-Urinary Diseases, August, 1892) says that as a rule local treatment is not required in the early stages of cystitis, but in some cases pain and frequent urination have yielded to the injection of a solution of silver nitrate into the prostatic urethra. When the affection becomes subacute, he recommends the injection of mild solutions of silver nitrate into the bladder so as to fill it. By this means the inflammation in the neighborhood of the prostate is cured, and a week later stronger solutions are injected. In some cases bichloride of mercury solution was injected, with satisfactory results. In the chronic cystitis of old men, good results were obtained by using injections of salicylic acid, especially when a good deal of mucus was present. Otis also discussed the method of cauterizing the affected spots of the bladder with the galvano-cautery, aided by the cystoscope; he did not think this form of treatment of much value, owing to the hæmorrhage which is produced. He said that when treating patients with the cautery it was better to open the bladder.

Cerebral Action of Some Medicaments.—Kræpelin (Rif. Med., July 11, 1892) says that a given drug has a different action on sensory and motor functions. Thus: (1) Alcohol in small doses impairs the sensory functions and excites the motor ones; in large doses it first aids the motor processes, then abolishes them. (2) Paraldehyde causes difficulty of the sensory functions and aids the motor processes; then rapid paralysis of these last. (3) Chloral impairs both sensory and motor functions. (4) Ether rapidly paralyzes sensory processes and excites motor; in large doses it increases the sensory paralysis, and eventually abolishes motion. (5) Chloroform has a similar but more rapid action. (6) Amyl nitrite causes excitement of the motor functions, slight paresis of the sensory processes. (7) Tea greatly facilitates sensory processes, after a time depressing them, but has little effect on the motor functions. (8) Morphine causes at first enormous excitation of sensory functions, but subsequent rapid depression; it causes marked and persistent paralysis of motor functions.

Inebriety Treatment.—Dr. Charles L. Dana has made a very careful study of 614 male alcoholics treated at Bellevue Hospital. He believes that strychnine has a certain degree of specific effect in inebriety and in alcoholic intoxication. In acute alcoholism, when the system is overwhelmed with the poison, one-sixtieth of a grain every two or three hours; in the chronic form, it should be administered in good doses for a considerable time. In ordinary acute delirium of alcoholism, twenty to forty grains of chloral, repeated in smaller doses in two or three hours, and combined with digitalis and strychnine, is the safest and surest means of controlling the excitement and securing sleep. A preliminary laxative, and a careful diet of hot milk and beef tea with red pepper, should be insisted upon. In febrile delirium tremens, depressants must be used with care; cold baths or cold wet-packs, with friction, must be applied every two or three hours while the temperature remains high. Hypodermatic injections of morphine are rarely

needed, and the author does not advise them.—*Medical Record.*

Action of Hydrastinine in Labor and in Hæmorrhage.—Faber (Therapeutische Monatschefte, July, 1892) used hydrastinine hypodermatically in thirteen cases of pregnancy. In one case it was without any effect whatever; in all the others contractions of the uterus were brought about by its use, but in no case was the birth of the fœtus hastened thereby. The contractions which are caused by the use of hydrastinine are of the nature of a tetanus, and do not resemble the pains in a normal contracting of the uterus. He also used hydrastinine in nineteen cases of bleeding from non-puerperal uteri, and obtained excellent results in fifteen of the cases.

Spermine.—Poehl (Bull. de l'Académie des Sciences, July 25, 1892) makes a further contribution to our knowledge of spermine. He is convinced that the activity of Brown-Séquard's injections is due to this substance. Spermine is found not only in the testicles, but in all glandular organs, especially in the pancreas, which contains large quantities. Some Russian physicians have made experiments on the effects of hydrochlorate of spermine. Their results lead them to consider this substance as quite free from danger, if used with care, and to act as an excellent nervine tonic. Hydrochlorate of spermine acts on the body after the manner of a true ferment, producing an increased rapidity of oxidation in the tissues.

Treatment of Vitreous Opacities by Fluid Extract of Jaborandi.—Dr. G. E. De Schweinitz (Therapeutic Gazette, July, 1892) gives notes of some cases of vitreous opacities treated with jaborandi, as first suggested by Dr. J. A. Spaulding (Arch. of Ophthal., April, 1892). Five cases were thus treated, in every instance with the most satisfactory results. After twenty-six days the vision in the bad eye had improved to $\frac{6}{9}$, and the vitreous had practically cleared. The patient's condition continued satisfactory. De Schweinitz lays stress on the simultaneous local use of eserine, both as a safeguard against rise of tension and to relieve any accommodative asthenopia. Though in some of the cases other drugs as well were used, the author thinks the maln credit was due to the jaborandi, which may be used either as fluid extract or as the nitrate of pilocarpine.

Medical Progress.

The Hypodermatic Use of Strychnine in Cases of Indian Snake-Bite.—The eminent Baron von Mueller, whose reputation is world-wide, has added another to his already numerous original discoveries. As President of the Therapeutic Section of the Intercolonial Medical Congress of Melbourne, Baron von Mueller announced, as the result of his researches, that strychnine was almost a specific for snake poison provided it were given in sufficiently large doses. Failure in this method was due to using inefficient doses. Doses up to four grains were sometimes necessary.

The experience of Baron von Mueller has recently been confirmed by an Indian hospital physician, who reports in the Australian Medical Gazette, July, 1892, seven successful cases of treatment of snake-bite by the heroic doses of strychnine of Von Mueller's method. We reproduce the report of cases of the Indian physician, R. P. Banerjee, B.A., G.B.M.S.L.:

Being given to understand the action of strychnine to be physiologically antagonistic to snake poison, I have had occasion of testing its efficacy in seven cases of snake-bite, as follows:

Case 1.—Bhagwan Singh, æt. 30, Hindu male Sepoy, East India Force, was bitten by a viperine snake (*Echis Carinata*) at 4 P.M., June 10, 1891, in the dorsum of left foot. He was removed to the hospital, tight ligature applied, and with the following symptoms: Heaviness of both legs; staggered if allowed to get up and walk; giddiness present; sense of sinking at the pit of the stomach; bleeding appeared from the mucous surfaces and old scars. Soon fell swooning.

Treatment: The puncture incised and blood let out; $\frac{1}{12}$ grain sol. of strych. acetat. hypodermatically injected. Again, the insensibility not gone after 30 minutes, another dose given, and so repeated the third time. The bleeding stopped and the man recovered his senses, but could not raise himself to talk. Many more doses were given under the skin, with one-hour intervals, and the man recovered the next day, but was much exhausted; was treated for weakness three days, and discharged to duty on the 14th. Puncture was distinct, symptoms well developed. Took 1½ grains strychnine to effect cure, leaving no after-effects of the drug or poison.

Case 2.—Sadig Husain, a Mussulman boy, æt. 12 years, bitten on the right ankle just below the inner malleolus by *Echis Carinata*

(khapar) on August 15, 1891; brought in with usual symptoms as above.

Treatment as before. This case took only ½ grain of strychnia acetas; the boy was weak and sickly. He was discharged cured on the third day, *i. e.*, August 17, 1891.

Case 3.—Nathey Khan, Mussulman; customs peon; æt. 35 years, robust and strong. Bitten by *Echis Carinata* (yellow variety). Puncture was on the left ankle over the outer malleolus; symptoms as given above.

Treated as before stated. This case took as much as 1¾ grains of strychnia acetas. Was admitted on August 9, 1891, and discharged on August 12, 1891, cured and fit for duty.

Case 4.—Musamat Jewai, Hindu female, a laborer, æt. 40, strong built. Bitten by karait (*Bungarus cæruleus*) about 2¾ feet long, above the left knee-joint. Ligature below the hip was used, but all the symptoms were present and the patient was insensible. Cyanotic marks were seen on the arms, abdomen, back, and neck. At first all hopes of recovery were given up, but attempts were made to see if anything could do good.

Treatment: Punctures scarified and cupping applied. Repeated doses of strychnia acetas hypodermatically given, but in ¼-grain doses. It seemed marvelous, the cyanotic patches in the skin gradually faded away, and the body became warmer. It was wondered if the person had expired, but suddenly the woman called for a drink of cold water to bathe her dry and parching mouth. This was done, and she recovered sense. She was admitted on September 3, 1891, and discharged on September 10, 1891. Took three grains of acetate of strychnine to effect cure.

Case 5.—Parvati Devi, Hindu female, aged 67 years, healthy constitution. Bitten on the great toe of the left foot on September 10, 1891; symptoms were as preceding. The wound was cauterized.

Treatment: Strychnia was given very cautiously, as the patient was over-aged—the degeneration of the heart kept in view; $\frac{1}{10}$ grain eventually showed the peculiar strychnia symptoms. The patient was cured in two days, and discharged cured on the third day, September 14, 1891. This patient took in all 1½ grains of the acetate of strychnia.

Case 6.—Maya Swuper, æt. 38 years. Bitten by *Echis Carinata, without dots*, in the lower third of the left leg, on the outside of it. Mucous membrane of the mouth, eyes, nostrils, ears, and urinary passages all bled profusely. Urine had clots in it, and symptoms resembled those in the first case.

Treated with strychnia, and recovered in four days. Was admitted on September 14, 1891, and discharged to duty on September 18, 1891. Took in all three grains to effect cure.

Case 7.—Avghunandan, Hindu male, æt 55 years; customs jemadar. Bitten at 8 A. M. on March 29, 1892, by *Echis Carinata* (the brown variety), on the right foot, near the cuboid bone. The punctures were distinct and the symptoms like those of Case No. 1. Bleeding was profuse in this case.

Treatment: Strychnia acetate injected, ¼-grain doses under the skin, and repeated as often as desirable. Patient recovered after the sixth day, and took in all 4 grains of strychnia acetate in six days. Only the bitten leg had erysipelas inflammation, which had to be treated afterwards, but the man was quite safe.

Remarks.—In connection with Echis bite one peculiar symptom was always noticed, that free oozing of blood from mucous surfaces and old scars of wounds was present; the power of co-ordination was very much affected from the first setting in of other symptoms. Usually after 24 hours symptoms had a relapse. On being treated with strychnia, neither the symptoms of the drug nor the snake poison ever showed themselves to be left behind; they seemed to neutralize each other. Karait (*B. cæruleus*) bite had its own peculiar symptoms of cyanotic patches and insensibility, swooning, and stertorous breathing; true comatose state was not present in any, but only a slight one noticed in cases Nos. 4 and 5. The other cases were generally delirious in the beginning.

THERAPEUTIC EMPLOYMENT OF VIBURNUM PRUNIFOLIUM.—Dr. Debierre, in an article in the Archivos de Ginecologia, Barcelona, states that *Viburnum prunifolium* has been, until now, almost solely used for premature birth, miscarriage, and post-partum pains. The causes of abortion are numerous, but the principal ones are: (1) Death of the product of conception; (2) utero-placentaria hæmorrhagè; (3) abnormal disturbance of the action of the uterus. *Viburnum prunifolium*, like other anti-abortive medicines (opium, chloral), cannot arrest abortion or premature birth when the fœtus is dead, the ovum broken, or pregnancy much advanced. Under other circumstances it gives satisfactory results. Monclar says that its action is to be depended on when given in very small doses, except when the state of the fœtus or womb makes the childbirth inevitable, or the waters have broken. In the last-named case it must not be administered unless to retard the

labor or prolong pregnancy and make the fœtus more lively. Auvard has employed it in the case of a woman who had premature rupture of the membranes, followed by contractions. Thanks to this medicine, it was possible for this woman to make a three hours' journey by rail and be confined at her home as desired. In certain cases of violent post-partum uterine pains, it soothes the pains that make the patients shriek. It is to be noted that the medicine only gives relief in pains *sine materia*. Those caused by the presence in the uterus of coagulation, or remnant of the membranes, or placenta, are best allayed by intra-uterine injections and washes. *Viburnum prunifolium* produces, above all, excellent results in habitual abortion. Six patients of Chenes Revill had miscarried from two to four times. All these except one were enabled, thanks to this remedy, to bring their confinement to a satisfactory termination. Wilson made the same observations, and Phares claims that viburnum neutralizes the abortive effect of the root of cotton tree, employed at least in the United States to procure illicit abortion. It probably has the same action against the supposed abortive properties of rue and sabine. In the habitual abortion, provoked by uterine irritability consequent on uterine congestions which supervene at the time that the regular menstruation should take place, or with delicate and feeble women "who abort from the smallest cause," of whom Moricea speaks, viburnum is preferable to opiates. The effect is not so troublesome as with the last-named drugs, and it may be administered as frequently as required, even to pregnant women who do not always have healthy kidneys—a circumstance that makes yet more dangerous the administration of opium. Time has not modified the opinion of Jenks in reference to its efficacy in preventing habitual abortion and too frequent or abundant menstruation; in chronic ovaritis and salpingitis he has treated a great number who arrived at majority accompanied with very frequent menstruations, and in every instance the courses became more regular and less abundant and painful under its influence. It has also been prescribed in dysmenorrhœa and hæmorrhage that accompanies the menopause. Certain practitioners have also tried it in diarrhœa, dysentery, conjunctivitis, aphthæ, and indolent ulcers, with unsatisfactory results; but that is not surprising, on account of the tannin contained in it. Monclar mentions a cure of colic with diarrhœa by 20 drops of tincture of the bark. The best preparation is the fluid extract administered in doses of two to ten grammes per day, and in the following manner: If to prevent a habitual abortion, which is feared at the time that the regular flow should come on if the woman were not pregnant, half a teaspoonful every three hours, four days before the time of menstruation until four days after that period. The disagreeable smell of the fluid extract makes it preferable to give pills of the solid extract in doses of from 25 to 60 centigrammes a day. The tincture of the bark is given in doses of from 60 to 100 drops a day, 20 to 25 drops every three hours.

Viburnum in Dysmenorrhœa.—It is known that the dysmenorrhœa sometimes observed in virgins is, in the large majority of cases, of a mechanical nature—that is to say, it is due to an anteflexion of the uterus, either congenital or acquired. In this form of dysmenorrhœa the uterine pains appear abruptly *with* the catamenial flow, persist as long as the menses, cease with them, and do not show themselves during the intermenstrual period. Such are the characteristics which clearly distinguish mechanical from congestive dysmenorrhœa. In the latter the pains supervene one or two days *before* the sanguineous flow, and disappear in the course of the first or second day of menstruation, and the intermenstrual periods are not entirely free from painful sensations in the hypogastrium.

According to Dr. Joseph, of Landeck, *Viburnum prunifolium* constitutes an excellent means of treating mechanical dysmenorrhœa in virgins. Its action is reported (Ther. Monatsh.) to be sure and powerful in nearly every case—the rare cases in which it fails being those where the dysmenorrhœa is not purely and simply mechanical, but where there also exist inflammatory conditions of the ovaries or of the peri-uterine tissues. To obtain a complete effect, it is necessary, according to the author, to commence the administration of the medicament ten to fifteen days before the expected flow, and continue it until the end of the same. From 20 to 25 drops of the fluid extract are given four times daily, and, it is maintained, with the result of thus obtaining absolutely painless menses. Besides its analgesic action, the viburnum is credited with also having the effect, in the cases of too abundant hæmorrhage, of reducing the loss of blood to normal proportions.

THE CAUSE AND TREATMENT OF GRAVEL AND THE URIC ACID DIATHESIS.—Sir William Roberts, in his Croonian lectures on the Chemistry and Therapeutics of Uric

Acid, Gravel, and Gout, points out that there are three orders of uric acid salts; that in addition to the neutral urates and biurates, which have long been recognized, there exists a third order, namely, the quadriurates, which in reactions and chemical constituents differ widely from the other two; that the neutral urates, from their mode of origin and reactions, cannot be regarded as having any possible concern in the vital history of uric acid; that the biurates, although known pathologically as constituents of gouty concretions, are not really known to us with certainty as physiological constituents, either of the blood or of the urine. On the other hand, Sir William shows that the quadriurates exist normally in human urine and in the urine of birds and serpents; that when uric acid is brought into relation with the bodily fluids—with the blood, lymph, and synovia—it enters into solution in the first instance, not as a neutral urate, nor as a biurate, but as quadriurate. From all these conditions it would appear, says the lecturer, that whenever and wherever uric acid exists in the healthy organism it exists exclusively as a quadriurate. The quadriurates may therefore be regarded as being in a special sense the physiological salts of uric acid, and as constituting the only form in which uric acid subsists in the living body in the normal state.

This is an important starting-point. Dr. Roberts then goes on to show that uric acid is precipitated as a biurate in gout *this* side of the kidney, while it is precipitated as uric acid crystals *that* side of the kidneys in gravel. He considers the two disorders by no means identical. Taking up the subject of gravel, he finds this due to the precipitation of uric acid in the renal and vesical urine. The causes of this precipitation are: the degree of pigmentation of the urine, the proportion of salines, the percentages of uric acid, and, above all, the grade of acidity of the urine.

Turning to the subject of treatment, Dr. Roberts discusses first that of gravel, which he considers "a primary vice of the urinary function." Since pigments in the urine lessen the tendency to the precipitation of uric acid, it might be thought that something might be done in this direction therapeutically. The lecturer, however, thinks this field unworthy of any effort. As to the deficiency in salines, the evidence points strongly to the suggestion that the subjects of gravel should be advised to take habitually with their meals as much culinary salt as their palates will tolerate. "I may also remind those whose lot it is to practice among the children of the poor, or among the rice-eating populations of tropical and subtropical countries, that it would be well, in cases of gravel, to see that the patient's food should contain an adequate proportion of articles rich in saline materials, that is to say, of milk, meat, fish, eggs, and salads."

As to the excess of uric acid in the urine, Dr. Roberts believes it to be not necessarily a matter of importance. This is contrary to the ordinary view, which holds that the occurrence of uric acid gravel depends simply on an excess of this substance in the urine (so-called uric acid diathesis). This assumption pervades the entire argument of most writers on gravel, and dominates all their plans of treatment. It is only partially true. It is on this theory that the various and contradictory systems of diet have been built up. As the outcome of his experience Dr. Roberts concludes: That persons who are subject to uric acid gravel, and who are also troubled with a large appetite, should seek to allay their cravings and to lessen the intake of nitrogenous material by the free use of farinaceous articles of food, with salads, fruit, and garden vegetables, all of which are comparatively poor in albuminoid constituents.

The excessive acidity of the urine he regards as the most important matter from a therapeutical point. It is advised that the patient take a single good dose of citrate or bicarbonate of potash at night, so as to prevent the tendency to increased acidity during fasting hours and sleep. The patient should not go long without eating; that is, he should not fast from breakfast till late in the day, as is done by some. The use of alkaline mineral waters is, of course, indicated. The treatment of gravel is a preventive one. Dr. Roberts has no faith in the solvent properties of any mineral waters, and he does not deign to mention piperazin. —*Medical Record.*

Some Remarks on the Value of Vegetable Alteratives in Chronic Venereal, Tubercular, and Malarial Diseases.—There are limitations to the province of physiological chemistry or bio-chemistry in satisfactorily explaining the *modus operandi* of very many of our most valuable medicinal agents. This is particularly true of the vegetable tonics when administered in wasting diseases. We may prescribe iron, arsenical, quinine, or other salts, in malarial, tubercular, or syphilitic anæmia, occasionally, in vain, when if we place our patient on fresh infusions, decoctions, or tinctures, immediate ben-

efit will follow. The profession is not by any means in accord with those who would have us believe that the time has arrived when medicines can be prescribed according to any set of rules, whatever scientific basis their construction may rest on.

Warburg's tincture, one of the most valuable anti-malarial remedies known, is unfortunately a secret, quack remedy, though owned by the British Government. Huxam's tincture, so long a secret compound of the Birmingham chemist, is now common property of the profession.

Cod-liver oil and its many preparations have held their own well in pulmonary tuberculosis. But there are many phases of surgical tuberculosis, and those conditions of malnutrition resulting from syphilis, in which the oil is not well borne. Here the vegetable tonics, particularly those rich in the alkaline salts, are invaluable. The tincture of hops, decoction of sarsaparilla, gentian, columbo, or chamomile may be taken either alone or in combination. A valuable combination of herb extracts was elaborated in the Southern States by members of the medical profession, as a substitute for mercury and the potassium iodide, during the late war of the rebellion, when all pharmaceutical supplies were shut out by the blockade and the advancing lines of the enemy. It is known to pharmacists and practitioners as Verrhus Clemiana, and is composed of *Clematis erecta*, *Prinos verticillatus*, *Fraxinus americana*, *Rhus glabra*, and one eighth of one per cent. of venanatic acid—all indigenous in the Southern States. I have extensively employed this compound in many cases of chronic tubercular, glandular, and bone diseases, besides other wasting maladies, with excellent results. Indeed, in these times pharmacy yields a large number of vegetable elixirs so palatable and easy of assimilation that one should always give them a protracted trial in the vast majority of tubercular or syphilitic bone or joint diseases before any sort of sanguineous operation is thought of.—Thos. H. Manley, M. D., New York, in *Doctor's Weekly*.

THE VALUE OF RECTAL INJECTIONS IN THE TREATMENT OF DYSENTERY.—Enemata can even be caused to pass the ilio-cæcal valve. It is, in fact, such an easy matter to cleanse out the lower bowel and apply directly our antiseptic, or astringent, or sedative, or stimulant, or whatever is desired, that the *rationale* of the treatment must appeal to all.

The patient lies on his left side, thighs flexed, hips elevated. An ordinary soft-rubber catheter is passed its full length into the rectum. The fluid is delivered from a fountain syringe, held from two to four feet above the body of the patient. The finger on the delivering tube acts as a governor to the amount of fluid which is allowed to flow. The lowering or raising of the reservoir determines the amount of pressure.

If the fluid is injected slowly, no pain is caused—except the feeling of weight and tension in the abdomen. Sometimes patients complain of colicky pains about the umbilicus, which pass away after a few moments' interruption in the flow.

If there is much tenderness about the anus and rectum, a cocaine suppository may be given ten minutes before introducing the rectal tube.

The amount which different patients are able to retain varies considerably. Adults usually hold four or five pints without difficulty.

In some severe cases, where the patient's strength is exhausted and the parts are relaxed, the injection will run out alongside the rectal tube at the same time that it is being forced in. In such cases I have used the longest rectal tube, and continued the injection until the return flow is as clear as the fluid injected.

The relief afforded is prompt and decided, lasting from two to fourteen hours after the enema, the time lengthening as the case progresses favorably.

Preferable solutions are blood-warm sterilized water, which answers in mild cases; sodium salicylate, 2- to 4-per-cent. solution; and peroxide of hydrogen, 10- to 25-per-cent. solution. When a distinct astringent is wanted, alum in from 2- to 4-per-cent. solution has been found to act promptly.—M. T. Rosenau in *New Orleans Medical and Surgical Journal*, July, 1892.

NEW ABORTIVE TREATMENT OF THE PUSTULES OF SMALLPOX.—Maurice Coste communicates to Bulletin de Thérapeutique a paper on the abortion of smallpox pustules, from which we extract as follows: Of the present known methods of treatment of the pustules of variola the majority are totally inefficacious, and the balance present dangers and difficulties which are apparently insurmountable. Having noticed that the pustules on the mucous membrane of the mouth, bathed by acid saliva, seemed to empty themselves, disaggregate, and heal in less time than those of other portions of the body, and without leaving scars, M. Coste tried on the face a method of treatment in which he realized the conditions of humidity and acidity

present in the buccal cavity. He covered the face with borated lint, in which apertures were made for the eyes, the nostrils, and the mouth. The covering was thoroughly wetted, by means of an atomizer, with a strong solution of boric acid. Over this were placed two other layers of borated lint, also wet with boric acid solution. The whole was covered with gummed taffetas, and held in place by a gauze bandage. In cases of men with beards, the latter were cut closely or shaved off. The application must be made at the very onset of the eruption, as soon as the latter can be seen. The dressing must be kept wet by means of the spray applied every three or four or five hours, or as often as needed. The main point is to keep the layer of lint next the skin constantly wet, and to this end it is necessary to take off the upper layers frequently. If the lower layer becomes soiled with discharge from the pustules, it must be removed and a fresh one employed. The employment of this treatment in a large number of cases has been followed in every instance by recovery without pitting.

THE TREATMENT OF EPILEPSY.—Frederick Peterson, M.D., in Dietetic Gazette, sums up the treatment for epilepsy in general by saying that for all forms it must consist of careful regulation of diet, hydro-therapeutic measures, outdoor employment, and the bromide of potash.

Occasionally there are cases that do not do well on a bromide. To these may be given borax in fifteen- to twenty-grain doses three times daily, after eating, or lactate of zinc seven to twelve grains at a dose. Tincture of simulo will at times be found useful in one- to two-drachm doses (Starr).

In *petit mal*, excellent results are seen from the use of nitroglycerin in doses of $\frac{1}{100}$ grain three times daily.

In the nocturnal form, tincture of belladonna five to ten minims, or atropine $\frac{1}{150}$ grain, alone, is at times strikingly effective.

For patients who feel their attacks coming on, Dr. Peterson is in the habit at the Vanderbilt clinic of providing a wide-mouthed glass-stoppered bottle containing nitrite of amyl in a plug of cotton. When an attack is impending, the patient smells of the vapor and often in this way wards off a seizure or diminishes its severity.

Whenever a case is taken in charge, he should be provided with a blank form, upon which not only should the patient register his attacks as they occur, but the physician should write his regulations for baths and diet and put down in cipher for his own use his treatment; the blank to be returned to the doctor in charge at the end of a year. A special form of blank is serviceable. It is printed on a heavy paper so that it will not wear out when carried in the pocket for a year; has spaces for monthly notes of treatment, for a daily record of attacks, for a monthly, half-yearly, and annual statement of the number of seizures, for the orders as to baths; and, furthermore, the proper regulations as to diet and kinds of food are printed upon the back of the register. Dr. Peterson will send a sample of this epilepsy record to any one who desires it. His address is 201 West 54th street, New York.

CAMPHORATED PHENOL IN SOFT CHANCRE AND BUBO.—According to Drs. Gamel and Lop, of Marseilles, camphorated phenol is the best dressing for soft chancres, very favorably modifying the evolution of phagedena, and rapidly effecting the cure of uncomplicated chancroids. A number of very extensive chancrous wounds that had lost their virulent character cicatrized in three days under the influence of the following mixture, applied twice daily:

> Carbolic acid (crystallized), 2 parts.
> Camphor, 5 parts.
> Mix, and heat gently over a water bath.

This mixture is a limpid, syrupy liquid, similar to glycerin, with an agreeable odor. Care should be taken to thoroughly cleanse the wound with absorbent cotton each time before applying the camphorated phenol. That done, small pledgets of cotton saturated with the medicament are applied, and maintained in place by means of a long cotton or salol-gauze bandage

In Dr. Gamel's service, suppurating buboes are treated by incision, washing with strong carbolized solutions, and dressing with camphorated phenol. As for buboes not yet in the stage of suppuration, but slow in resolving, they are favorably influenced, according to Dr. Gamel, by injections of iodoformized ether—1 cubic centimetre (16 minims) of this liquid being injected three times a week by means of a syringe with a needle a little longer than in that used for hypodermatic injections.—*Merck's Bulletin.*

TO RELIEVE HICCOUGH.—John Morton, M.D., reports in Indian Medical Record that he succeeded in curing an obstinate case of hiccough which resisted many remedies, by administering apomorphine hypodermatically. Emesis quickly took place, and the patient was relieved permanently.

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Original Articles.

PATHOGENY AND THERAPEUTICS OF URÆMIA.*

BY PROF. CHARLES BOUCHARD.

I regard uræmia as a complex poisoning, to which contribute in unequal proportions *all* the poisons introduced normally or fabricated physiologically in the organism, when the quantity of poison fabricated or introduced in twenty-four hours can no longer be eliminated in the same time by the kidneys by reason of their impermeability.

This conception, of the legitimacy of which I think I have convinced you, differs assuredly from the old doctrines, and even from those now prevalent, which attribute to one sole substance all the accidents called uræmic.

Between Schottin's view, who incriminates the entire group of extractive substances (creatinæmia), and that which I have proposed, there is still this difference: that Schottin and his followers have in mind as toxic agents, only matters having their origin in disassimilation. Now, in my estimation this is only one of the sources of production of toxic agents, and needs to be supplemented by the poisons furnished by the biliary secretion, alimentation, and the intestinal putrefactions.

The pathogenic theory, then, which I have taught for many years, is more comprehensive than the others. The conception of uræmia given above has led me to therapeutic considerations which I am about to present.

But I must first take up the question as to whether other eliminating organs may possibly supply the place of the kidneys. I need not tell you that physicians have for a very long time had the conviction that, in cases where the renal apparatus fails to perform its depurative function, it might be possible to supply the place of the damaged organ by acting on other emunctories, as the skin and lungs and intestinal canal. Hence uræmic patients have been treated to baths of warm and dry air; it has been attempted by this way to introduce at each inspiration a certain quantity of dry air, which, when expelled in expiration charged with moisture, might thus withdraw water from the organism. Physicians have also sought to remove water from the economy by increasing the quantity of sensible perspiration by vapor baths, jaborandi, etc.

By all these means we undoubtedly rid the blood of something, but unfortunately not of those toxic substances which should pass out by the kidneys; at the best we only increase the elimination of those toxic elements which are peculiar to the cutaneous secretion. What we remove chiefly by these means is water; the inevitable result is a diminution in the quantity of urine. And it is difficult for me to admit that this diminution of urine is a good thing in patients whose urine is already reduced in quantity and in density.

We act more reasonably when we endeavor to augment the renal secretion by divers means. Sometimes we try to diminish the congested state of the kidneys by revulsives (wet or dry cups, leeches, sinapisms). Sometimes we endeavor to stimulate the nervous system by irritating the cutaneous nerve-ends by frictions, in order to obtain reflexly an acceleration of the renal circulation and promote the secretion of urine. I am convinced that in many cases frictions of the skin augment the urinary secretion. The same result has been sought by the administration of certain medicines, such as caffeine and digitalis, which act on the central nervous system.

With regard to digitalis, I cannot too much warn you that this medicine ought not to be employed indiscriminately in all periods of

*A lecture delivered before the Faculty of Medicine, Paris, France.

diseases of the kidney. When the renal function is embarrassed, it is necessary to exercise extreme reserve in the use of certain medicaments. When the impermeability of the kidney has become so great that this organ is no longer capable of eliminating the toxic matters fabricated by the organism, it keeps back also medicinal substances; the kidney, in fact, is as impermeable to the therapeutic poisons as to the natural poisons, and the employment of toxic medicaments in such a case has no other effect than to add medicinal poisoning to uræmic poisoning.

Digitalis, nevertheless, succeeds in certain nephritic patients in augmenting the quantity of urine; but this is most likely to happen when there are cardiac troubles associated with disease of the kidney, and when the impermeability of that organ is not yet very great. At a more advanced period the action of digitalis is to be distrusted and dreaded—I do not say that it is necessary absolutely to renounce its administration, but its effects should be closely watched. It is not the part of prudence, however, to employ this medicine in *small* doses only; you must give it in sufficient doses—doses which run the risk of being toxic—otherwise you will obtain no effect at all; but these doses should be so divided up that you may have time immediately to stop the treatment if you see signs of gastric intolerance (if, for instance, nausea and vomiting appear).

I need not tell you that digitalis is inapplicable to that form of uræmia which is characterized clinically by violent gastro-intestinal symptoms.

There are still other means of augmenting the secretion of urine. One may make the attempt to displace a part of the mass of blood which is in relative stagnation in certain parts of the vascular system, and to force it back into the greater circulation, in order to augment pressure in the vessels of the kidney. In the venous and capillary system of the abdomen and liver, there is accumulated a considerable mass of blood—*i.e.*, in the portal system, in the hepatic and splenic parenchyma. We may force this back into the general circulation, or, in other words, empty the portal system, in order to augment the general arterial tension and start the renal secretion. This result may be obtained by the introduction of cold water into the abdomen, or by the employment of cold lavements. I have in certain cases seen a grave anuria yield to cold lavements; this, then, is a means which ought not to be neglected. The same remark will apply to the use of cold drinks, which, beside the stimulation which they impart to the contractility of the abdominal vessels, cause a certain quantity of water to be absorbed which goes to favor diuresis. Among the liquids which are suitable for this purpose, milk is one of the most powerful medicaments with which to combat the uræmic accidents. This is a fact everywhere acknowledged.

We might also use as a medicament a substance which has been, down to the present time, considered as a poison, and which is capable more than any other of provoking the urinary secretion; I refer to urea, to which we cannot certainly attribute the uræmic accidents of nephritis, and which is even able to combat them by forcing the renal barrier. In animals, urea has been experimentally demonstrated to be a diuretic. In the healthy man, when ingested by the stomach, it has not seemed to augment the quantity of urine. It remains to be determined if in the sick man it may not be possible by subcutaneous injections of urea to increase the urinary secretion. I have undertaken in animals, and still later in man, experiments of this sort. In a patient suffering from Bright's disease with cardiac affection, I once saw a subcutaneous injection of urea cause a diuresis of seven quarts in twenty-four hours; but I am frank to say that, with the subsequent return of the suppression of urine in this same patient, the injection of urea failed, as did also the administration of digitalis which several weeks before had provoked an abundant diuresis.

I have said that the skin and lungs cannot supply the place of the kidney, being incapable of accomplishing its eliminative function. But may not other emunctories do this? Or at least, may we not utilize as emunctories the great mucous surfaces of the stomach and intestines?

Physicians have long combated uræmia by promoting vomiting. They have sought to imitate what takes place in certain cases of

uræmia when vomiting is frequent; and they have thought it possible to provoke at the surface of the stomach an excretion of extractive matters.

It has not been demonstrated that emetics notably augment the gastric secretion. They have, on the other hand, two evident inconveniences, for they produce two effects: lowering of the arterial tension, and consequently diminution of the renal secretion; and augmentation of the cutaneous secretion, which also diminishes the renal secretion.

It is a much more sensible practice to solicit elimination by the intestine, and to augment its secretion by drastics.

Purgatives have long been employed from theoretical considerations. Wilson taught that by this means urea could be got rid of. But the intestinal secretion has not a selective action on urea, which is removed from the blood only in the proportion in which it is found in the blood-plasma. If the serum of the blood contains 32 centigrammes of urea per litre, the liquid which exudes into the intestine under the influence of purgatives will contain exactly 32 centigrammes of urea per litre. But, on the other hand, if you drain from the blood a quart of water by the intestinal canal, there will be a quart less to pass off by the kidneys; and that quart of water, if eliminated by the kidneys, would have carried away fifty times as much urea. Moreover, we know that Wilson's theory of uræmia is false, and that urea is not the cause of the so-called uræmic accidents.

Reflect what is the composition of matters eliminated by purgatives, not to take into account anything but the toxic substances. Purgatives remove water; they dehydrate the blood and consequently the tissues. This dehydration may help diminish anasarca and effusions into the serous sacs; it perhaps takes away water from the cells, and with this water some amount of toxic substances. But there will be no benefit derived from this unless you restore immediately to the tissues the water of which they have been deprived. You have, it is true, displaced the poison by withdrawing it from the cells into the plasms, but the dehydration of the blood and tissues may be carried to a dangerous point.

I would not, however, go so far as to condemn a therapeutic measure on which clinical experience seems so long to have pronounced favorably. The intestinal flux does not remove urea from the blood, but it does remove poisons. In a perfectly healthy adult, I measured for six consecutive days the toxicity of the urine by periods of four hours each. The curve of this toxicity was reproduced every day regularly, and was always the same. A diarrhœa set in, and I noticed a perturbation. During the four hours coinciding with this diarrhœa the toxicity of the urine had diminished notably. I am perhaps right in thinking that the poisons which were then lacking in the urine had been carried off by the intestinal flux.

We have thus far been considering therapeutic means which are doubtful if not injurious. What shall we say of blood-letting? What do we do when we take blood from a uræmic patient? In letting one ounce of blood you remove eight grains of extractive matter; the daily elimination by the urine is one hundred and twenty grains. You thus take away by blood-letting about one-fifteenth of the extractive matters which the urine should remove.

This result is not insignificant; for if the kidney ought to eliminate in an hour these eight grains of extractive matters, and if the convulsive or comatose accidents resulting from this non-elimination may kill the patient during this hour, the blood-letting which you perform may save the life of your patient by removing for the time the excess of toxic substance which causes the fatal accidents to burst forth. In any event, it is certain that we can remove from the economy much more of extractive matters by bleeding than by any other way, with the exception of the renal emunctory; for a blood-letting of 32 grammes (one ounce) eliminates as much as 280 grammes (9 ounces) of diarrhœaic liquid and 100 litres of sweat.

Moreover, it is not merely 32 grammes of blood—the quantity which two leeches would draw—that you would withdraw in such cases; you would bleed copiously, if you wished to benefit your patient. Abercrombie, Marshall Hall, and Rayer have employed full venesections to combat uræmic accidents, and have seen patients recover that were surely menaced with death.

It is especially in the forms of acute curable nephritis, such as scarlatinal nephritis, that bleeding finds its formal indication if uræmic accidents set in; for in such cases the kidney disease demands only time to get well, and will get well if the patient does not succumb to the brief and passing assault of the uræmia. In an event of this kind, then, it is obligatory to practice bleeding, not only because it is theoretically legitimate, but because in actual practice it has been found to do good.

On the other hand, in chronic diseases of the kidney the utility of blood-letting is doubtful. We cannot go on continually letting blood in a uræmic patient whose kidney is definitively and irrevocably damaged and impermeable, and we hasten his death by impoverishing his blood. We are, then, warranted in bleeding *once* in the terminal uræmia of chronic nephritis at the moment of accidents which threaten to cause death immediately, and as a last resort to put off for a little while the fatal termination.

Since in most cases we cannot hope to derive great benefit from bleeding, some therapeutic authorities have suggested the employment of counter-poisons capable of opposing their physiological effects to those of the poisons which have determined the uræmic accidents.

Inhalations of chloroform have succeeded, especially in that particular systemic intoxication which singularly resembles uræmia, the eclampsia of lying-in women. They have not appeared to be so beneficial in the uræmia of ordinary nephritis. At any rate, these inhalations only find their application in the convulsive form; no one would think of resorting to them in the comatose forms. It is also for the convulsive form that the action of chloral should be reserved —a remedy whose value in such cases is still *sub judice*.

Bromide of potassium, which some have also proposed, should be at once discarded, for it may itself poison by the potash which it contains. But if you think the bromide indicated to combat the convulsive accidents of uræmia, you should prescribe the sodium bromide, for you ought never to give your uræmic patients any potassium salt—and this applies to nitrate of potassium as well as to the bromide. You can, moreover, replace to advantage these potash salts by the soda salts; thus, bromide of sodium and nitrate of soda are as active therapeutically as their potassium congeners, and forty times less toxic.

This, then, is about the sum of the therapeutics of uræmia, such as our predecessors have handed down to us. Among all these means, what remains of real value? Certainly we cannot gainsay the advantages of a few diuretic agents, at the head of which is milk. Nor is the utility of blood-letting to be overlooked in certain cases. Perhaps, moreover, there may be something to do to meet the uræmic accidents by applying that *pathogenic therapeutics* the advantages of which I have been laboring to demonstrate during these past six years of my professorship.

There are, perhaps, therapeutic indications to draw from the knowledge we possess of the sources of accumulation of toxic matters in the economy: 1, disassimilation; 2, the secretion of the liver; 3, ingested food; 4, intestinal putrefactions. Let us see if we can act on each one of these sources of systemic intoxication, in order to suppress or diminish them.

1. Can we hinder or prevent disassimilation? Is there any indication to administer those substances which are thought to retard the nutritive exchanges, and which have been called *sparing medicaments*, such as arsenic and valerian? This would be useless. The disease has itself produced this arrest of disassimilation. The accumulation of toxic matters has trammeled the conditions of osmosis; an equilibrium of tension is established between the liquids intra- and extracellular; the circulation of matters through the cells is effected but imperfectly. The combustible substances and the agent of combustion, oxygen, scarcely any longer enter into conflict, so that we see the temperature fall—an evident proof of the slowing of nutrition. The temperature may fall to 96° F. in the rectum. The disease has itself gone ahead of the desideratum which we were formulating; it is useless to think of further impeding the oxidations, the insufficiency of which in the economy may of itself cause death. I go even farther than this: The products of life without oxygen

are especially toxic. Augment the disposable oxygen and you will augment, though very moderately, disassimilation, but the products of this disassimilation will be much less toxic. I have seen a sojourn in compressed air diminish the toxicity of the urine by more than one-half. It is, then, rational to adopt the practice of Jaccoud, who extols inhalations of oxygen in the treatment of uræmia.

2. What can we do to oppose that source of poisoning which resides in the biliary secretion? First, we can diminish the quantity of bile secreted. An excellent empirical means is milk diet, when the milk is well digested—for if it is not absorbed, it purges, and augments the biliary secretion; but when the digestion of the milk is perfect, constipation is established, and the hard and dry fæcal residue which is left behind contains scarcely any bile pigment.

Moreover, the bile when it is formed may be expelled by the aid of certain neutral salts whose action consists in the speedy washing-out of the contents of the intestine by means of the serous exudation which it occasions. But the greater part of the toxicity of the bile belongs to the coloring matters; I have, in fact, proved that decolorized bile is much less toxic. We have the means of decolorizing bile in the digestive tube by administering powdered charcoal in sufficient doses.

3. We can diminish the source of toxicity in the ingesta by diminishing the latter from the point of view especially of mineral matters and of potassa, which contributes an important part to this kind of poisoning. You will select for uræmic patients foods which are rapidly digested and absorbed, but which will still have the advantage of not yielding up to the agents of intestinal putrefaction undigested matter which is easily putrescible. Choose aliments poor in extractive matters and in potash, and counsel almost entire abstinence from meat; you will not err in prescribing milk, which contains but little potash and which has so often had a beneficial effect in the treatment of uræmia. You may add white of egg, and allow some patients cheese, which contains none of the soluble matters of the milk; and, for the same reason, milk curds. Boiled meat is less digestible than broiled or baked, and you will of course interdict broth, bouillon, and beef tea.

4. Lastly, a very important indication is to contend against poisoning by the products of intestinal putrefaction. You should aim, then, to admit but a minimum of purtrescible matter into the digestive tube, in order that the residue of digestion may make solid masses, presenting to the contact of the absorbing mucosa only surfaces that are hard and of little extent. Pasty, bulky residua, incessantly worked over by the intestine, successively yield to the absorbing vessels the poison contained in their superficial and deep strata. Milk diet, when well tolerated (which is the rule when the milk is ingested in small quantities at intervals), produces the desired result, *i.e.*, fæcal matters which are scanty and solid. So, from whatever side you regard it, milk opposes all the sources of systemic poisoning.

We can also fix and neutralize the toxic products of intestinal putrefaction, in order to prevent their absorption; charcoal gives us the means for doing this. We can even successfully combat the intestinal putrefaction itself, by carrying out intestinal antisepsis; we possess in the association of iodoform with charcoal, in naphthalin and naphthol, and salicylate of bismuth, means which theoretically enable us to practice intestinal antisepsis rigorously. The subnitrate of bismuth may be used for the same end by those who are afraid of the accumulation in the blood of the small quantity of salicylic acid which the bismuth-salicylate contains. In fact, so impressed with the utility of intestinal antisepsis are physicians becoming, that my colleague, Dr. Tapret, has applied this theoretical notion to the treatment of uræmia, and he has three times seen the uræmic accidents yield when intestinal antisepsis was realized. I have myself seen in one case a formidable uræmic dyspnœa disappear from day to day after the administration of naphthalin; the patient, who was diabetic, succumbed later to gangrene, but he certainly would have died much sooner from the uræmia but for the treatment. These are but four cases, but they are encouraging, especially when we think of the small number of therapeutic resources at our command in uræmia.

So, to sum up: Diuretics, and at the head of them milk; milk as a food; intestinal antisepsis; blood-letting for the accidents immediately threatening; lastly, inhalations of oxygen. These constitute the treatment which experience sanctions.

It is also the treatment which quite naturally follows from the pathogenic conception which I have presented.

THE WEIGHT OF THE BODY IN ITS RELATION TO THE PATHOLOGY AND TREATMENT OF CLUB-FOOT.*

BY A. B. JUDSON, M.D.†

I desire to present a few thoughts, of an extremely practical kind, relating to the treatment of talipes equino-varus, beginning with congenital club-foot. It is well to bear in mind that there is a vast difference between a child recumbent and a child walking. While the child is in arms the case is yet free from the complications and difficulties caused by the falling of the weight of the body on the deformed foot. These twelve months, more or less, are the most important year in the history of the case, because in this period the foot is to be changed so that when the child begins to walk, the use of a slight walking-brace, exerting only a moderate degree of force, will convert the weight of the body from a deforming into a correcting agent. During these months of recumbency, with the weight of the body out of the way, with all the tissues soft and formative, and the foot more than doubling in size with the growth of the child, there is every reason to expect to succeed in what we undertake, provided time enough be given to the case and faithful attention to the details.

The apparatus which I have conveniently used to effect this reduction, before the child learns to stand, is a simple retentive splint which acts as a lever, making pressure on the outer side of the foot and ankle, at A (in Figs. 1 to 4 inclusive), and counter-pressure at two points—one on the inner side of the leg, at B, and the other at the inner border of the foot, at C. It is advisable to keep in mind that this simple instrument is a lever, because if we know that we are using a lever, with its three well-defined points of

FIG. 1.

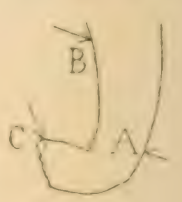

FIG. 2.

pressure, we can make the apparatus more efficient than if we view it in a more general way as an apparatus for giving a better shape to the foot.

I use a little brace made of sheet brass, doing the work with a few simple tools. An advantage of doing the work one's-self is that there is no room for doubt as to where the blame lies if the apparatus does not work well. Two curved disks, B and C (Figs. 3 and 4), are riveted to a shank, D, and

FIG. 3.

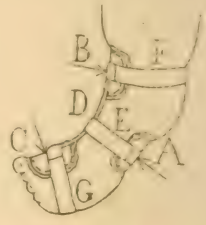

FIG. 4.

thus is formed that part of the brace which applies the two points of counter-pressure, while on the other hand the point of pressure is brought into action by a third disk, or shield, A, which is drawn tightly against the outer side of the foot and ankle, and held in place by a strip of adhesive plaster, E, which includes the limb and the piece which connects the two disks B and C. The disks are lined with two or three thicknesses of blanket—easily renewed, when necessary, with a needle and thread. These braces are so cheap and easily knocked together that it is nothing to apply new and larger ones, using heavier material for the shank, as the child grows. In general, three sizes will be enough, the shanks being 12 gage $\frac{3}{16}$ in. wide, 14 gage $\frac{1}{2}$ in. wide, and 16 gage $\frac{5}{8}$ in. wide. The disks are conveniently made

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†Orthopædic Surgeon to the Out-patient Department of the New York Hospital.

from 22 gage 1¼ in. wide. The rivets are copper belt rivets No. 13. A lip turned on the edges of the disks, with the flat pliers, gives stiffness to the thin brass and protects the skin from the rough edge. If more easily obtained, tin disks, light bars of iron or steel, and ordinary iron rivets, would doubtless answer.

The brace is applied with three strips of adhesive plaster. The upper and lower pieces, F and G (Fig. 4), are simply to keep the apparatus in place, which they do effectively if ordinary gum plaster is used, while, by drawing the middle strip, E, tightly over the shield, and straightening the brace from time to time, the deformity is gradually and gently reduced. At each reapplication the brace is made a little straighter than the foot at that stage. This may readily be done by the hands; and then the adhesive strip is to be tightened over the shield till the shape of the foot agrees with that of the brace. After a few days the brace is to be made still straighter, and again reapplied and made tight till another point of improvement is gained. The brace is applied very crooked at the beginning of treatment, as in Figs. 3 and 4, and is straightened from time to time, and a longer brace applied as the deformity is reduced and the patient grows. It should be removed every week, or two weeks, and an interval of a few days allowed for freedom, when the mother is advised to manipulate the foot constantly, using as much force as she will in the direction of symmetry. Manipulating the foot during these intervals is of great importance, as cases have occurred in which varus and equinus have been entirely overcome by the mother's hand alone.

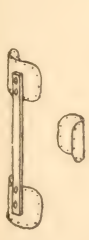


FIG. 5.

FIG. 6.

By this simple and prosy treatment, carried out systematically and without haste, or violence, or pain, the foot, unless it is a frightful exception, may with certainty be changed from varus to valgus. At the same time the tendo Achillis is lengthened till the position of the foot is near the norm, or at right-angles with the leg, as the result of manipulation and giving the brace from time to time a partly antero-posterior action. Figs. 3 and 4 show approximately the shape of the brace at the beginning of treatment; Figs. 5 and 6 when the varus is reduced; and Figs. 7 and 8 when valgus has taken the place of varus. The foot in this latter stage may not hold itself valgus when left

FIG. 7.

FIG. 8.

to itself, but, with almost no force, and with one finger, it may be pushed into valgus; and in this condition it must be when the child begins to walk. And then another stage of treatment begins.

When the patient begins to walk we have a new difficulty. It is now seen that the weight of the body, falling on the tender and ill-formed foot, will, if not properly directed, defeat all our efforts. Let us, for a moment, consider the mechanical environment of the human foot. In the first place, the corporal weight, which the quadruped distributes among four pedal extremities, falls in man upon two. Again, the small floor area covered by the feet, and their slight structure, seem unequal to the task of supporting the towering frame above them, which in some cases almost resembles a pyramid resting on its apex. And when we observe the effect of active locomotion, we see weight and momentum combined in an apparent effort to crush and destroy. And furthermore, when extraneous weights are added and the strain is prolonged, as in the case of the burden-bearer among savage tribes, or the infantry soldier on a forced march, the endurance of the foot excites wonder. It is not strange that the feet are

subject to ailments—to blisters, bunions, ingrowing nails, hallux valgus, hammer toes, loss of the arch, weak ankles, painful affections of the metatarsus, perforating ulcers, osteitis, and the varieties of talipes. The wonder is that they are not permanently disabled soon after walking is begun, and certainly when the adipose tissue of the body takes on the development which accompanies age and good living. The gourmand Savarin said that, among the works of creation, the design of the human foot was a conspicuous failure. Considering the immense weight carried by the foot, it is evident, however, that only the most perfect natural adaptation of mechanics has enabled this insignificant member to perform its superlative functions, and that great caution should attend all procedures having for their object its artificial reconstruction.

It is also sufficiently evident that the correction of club-foot by mechanical means, while the patient continues walking, is a problem beset with difficulty. We have, however, a luminous ray of hope and encouragement in the observation that, in talipes varus, there is an important boundary line between deformity and the norm. If the foot is held in some way, now to be considered, on the right side of this boundary line, each step forces it in the direction of valgus, and the increasing weight of the child is a powerful force acting in the right direction, or away from varus, so long as the foot is held, though never so little, looking toward symmetry. It may be said that the child stamps his foot straight. If, on the other hand, the foot is held, or allowed to fall, on the wrong side of this line, though never so little, each footstep is a blow, driving the foot more and more into the varus position.

This point may be illustrated by the hand placed with its ulnar border on the table. If considerable pressure be made on the table by the hand so placed, it becomes evident that there is a boundary line between pronation and supination. If the hand be pronated, never so little, additional pressure will force the palm into pronation, which represents valgus in the foot; and if the hand be supinated in the slightest degree, additional pressure will force the palm into complete supination, which represents varus in the foot.

By the application of this idea, the weight of the body may be made a beneficent, instead of a harmful, factor in the progress of a case of talipes varus; and the walking-brace should be constructed with this in view. It should be made of steel, and by an instrument-maker. One of its functions is to act as a lever, but the leverage is applied not chiefly to overcome the deformity by direct force, as in the retentive brace above described, but to hold the foot on the right side of the boundary line above mentioned, so that the weight of the body may straighten the foot, or overcome the varus in a direct and forcible manner, without general or local inconvenience.

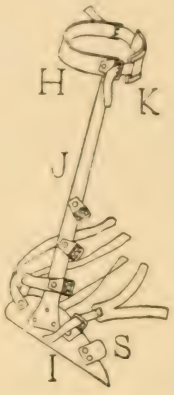


Fig. 9.

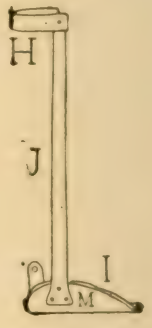


Fig. 10.

The walking-brace consists, as usual, of leg-band, H (Figs. 9 and 10), foot-piece, I, and upright, J, riveted firmly together. A movable joint at the ankle should be discarded, as it undermines the lever by introducing an element of instability and, in this brace, serves no good purpose. Mild steel alone should be used, to facilitate alterations in shape as point after point of improvement is gained, and to make easy the shifting of buckles and straps as may be required; all of which may be done by the use of a few simple tools. The upright is to be on the inner side of the leg, as in Fig. 14. The upper part of the brace makes counter-pressure on the inner side of the leg; but it has another important function, in previously neglected cases, which is secured by the steel band passing across the back of the leg, to which are fastened two buckles for the at-

tachment of a piece of webbing (K, in Fig. 9) which passes across the front of the leg. The steel band should make no pressure on the limb, as its use is simply to furnish attachment to the buckles. A piece of webbing spanning the front of the leg in this manner, and carrying a pad, performs an important service in cases (like the one shown in Fig. 12) in which, from previous neglect, the varus

FIG. 11.

FIG. 12.

has not been reduced before walking begins. It transfers a part of the weight of the body from the anterior part of the sole of the foot, where it interferes with the correction of the varus, to the upper part of the anterior surface of the leg, where it is powerless to interfere with the treatment. That the weight-pressure thus transferred is considerable, is shown by the callus and bursa which appear where the padded strap crosses the leg near the tubercle of the tibia. This mechanical effect is similar to that of the brace (shown in Fig. 11) used in the treatment of paralysis of the muscles of the calf resulting in talipes calcaneus.

The upper part of the brace is also to be considered in another light, as follows: In previously neglected cases it is well to incline the upright 15° or 25°, or more, backward from the vertical of the foot-piece, as is shown in Fig. 9. Although correction of the equinus is postponed by this inclination of the upright, we are thus enabled to apply a better leverage against the varus; and when the varus is reduced, and the time arrives when the equinus is to be corrected, this backward inclination of the upright is to be lessened from time to time till the vertical is reached, as in Fig. 10, or till the upright has an inclination forward, allowing the corporal weight to fall more and more on the anterior part of the sole of the foot, and gradually lengthen the tendo Achillis. The vertical upright (Fig. 10) is to be applied at once to patients in whom the deformity has been corrected before walking begins.

We will now pass to a consideration of the other end of the brace, the foot-piece, which is to be made of sheet steel ranging from 18 gage, for a child learning to walk, to 13 gage for an adult. It has the usual tread (L, Fig. 13) and riser (M, Fig. 10). The heel-cup is formed by a piece of webbing (N, Fig. 13) passing behind the heel, from the lower part of the upright to a spur (O, Fig. 13) which projects upward from the back part of the outer border of the tread. Viewing the apparatus again as a lever for the forcible reduction of varus in a previously neglected case, counter-pressure is made along the inner border of the foot and on the upper part of the inner side of the leg, while pressure is made by one strap, or more than one, riveted and buckled to the foot-piece and the upright. But one strap is shown (P, in Figs. 13 and 14). This will be sufficient in the case of a child whose varus has been corrected before walking begins; but in a previously neglected patient, in whom the varus has yet to be reduced while the child

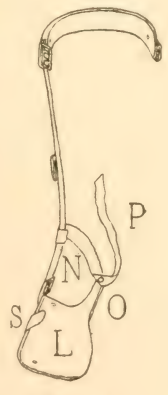


FIG. 13.

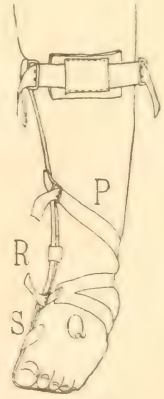


FIG. 14.

is active on his feet, two, three, or more straps may be added, as shown in Fig. 9, partly encircling the foot, ankle, and leg, the positions of the buckles and the straps being where they will assist most efficiently in opposing the varus and holding the foot in

the best position to receive the weight of the body. These parts of the apparatus may be shifted many times, with advantage, in the treatment of a given case of unusual difficulty; and in addition, a most efficient agent for applying continuous pressure is found in a strip of adhesive plaster (Q, Fig. 14) sewed to a piece of webbing (R), the plaster partly encircling the foot and ankle, with a single tail, or two tails, as may be required, and the webbing being drawn tightly and buckled to the inner side of the riser. This device does more than simply increase the amount of pressure; it also keeps the heel down on the tread of the foot-piece, and, more important still, it gives the foot a rotation outward and thus directs the sole of the foot forcibly toward the ground in the best position for making the

FIG. 15.

FIG. 16.

weight of the body a corrective instead of a deforming force. The riser of the foot-piece may also, in previously neglected and difficult cases, carry an oar (S, Figs. 9, 13, and 14) made of sheet brass, which is to be bent downward over the first metatarso-phalangeal joint, to prevent the inner border of the foot from overriding the edge of the riser. The foot-piece is to be lined with adhesive plaster, in several thicknesses if necessary, to prevent rust, and with a piece of leather fastened to the tread and spur with copper rivets, as shown in Fig. 10. In practice the details demand as much attention as the principles of treatment. The brace is to be applied over the stocking—the strap R passing through a hole cut in the stocking—and is hidden by the patient's trousers and shoe.

We will now consider the upright of the brace. It is a flat, tapering bar of mild steel, and, when first applied to a previously neglected case, such as is shown in Fig. 12, should have a curve resembling that of the varous foot. The bar, though sharply curved, as in Fig. 13, should, however, be somewhat straighter than the foot when the latter is forced manually into its best position. The multiple straps, shown in Fig. 9, should then be buckled and tightened daily, till the continuous leverage has partly reduced the varus. The upright bar should then be somewhat straightened and another point of improvement be gained, the patient in the meantime following his ordinary pursuits without interruption. In due time the upright bar, and the foot itself, will both be

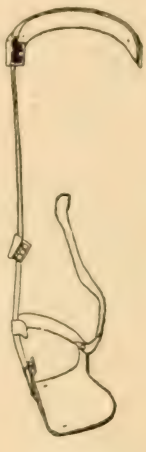


FIG. 17.

FIG. 18.

straight, as seen in Figs. 15 and 16; in other words, the varus will be reduced. The upright should then be bent, from time to time, in the direction of valgus, as seen in Fig. 17, and the persistent and gradual effort resumed until the foot has been pushed, or pulled, or pried, over the boundary line into the domain of valgus, as seen in Fig. 18. These efforts would not be necessary if the varus had been converted into valgus before the child had learned to stand. In very badly neglected cases the interference of the weight of the body with the treatment may be prevented by the recumbent position, or the use of a high sole on the well foot and the ischiatic or axillary crutch, until the varus has been materially reduced. In all cases, when the child is old enough to be

docile, domestic instruction and drill in eversion of the foot, and in the proper management of the foot in locomotion, should be a part of the education.

As soon as the foot has reached the valgus shape, whether it be at the moment of learning to walk, or only after prolonged effort in a neglected case, a curious effect will be observed. It will be seen that the outer border of the tread of the foot-piece is raised from the ground, as seen in Figs. 19

FIG. 19.

FIG. 20.

and 20, and that we have secured, in a convenient manner, the effect which is sometimes sought by building up the outer border of the sole of the patient's shoe. This is a welcome and powerful ally in our attempts to hold the foot in a favorable relation with the weight of the body and the ground.

The walking-brace has been above described as though its chief use were to reduce varus which has become more or less confirmed by the habit of walking on the outer border of the foot. Strictly speaking, such cases should never occur. They are, however, too common, and always indicate that the child has been neglected from the period of recumbent infancy, when deformity of this kind is the most easily overcome. If the varus were always corrected before the child learns to stand, then the only use of the walking-brace would be, as shown in Figs. 19 and 20, to gently hold the foot in valgus so that the weight of the body shall be sufficient to lead the child to grow up with a foot practically normal. As such a child outgrows the brace, a larger one is to be made, and when three or four years old the foot will, without the help of the brace, strike the ground so fairly that for two or three years all treatment may be suspended. The patient is to be observed from time to time, however; and as the foot grows in its original inclination to varus, it will, after the lapse of two or three years, have to be kept in proper position, under the rapidly increasing weight of the body, by a walking-brace adapted to its needs, for another period of two or three years. When the foot is full-grown it will be shapely in appearance and practically perfect in its ability to perform all the duty of a foot congenitally normal.

Although congenital club-foot has been chiefly kept in mind in the above pages, the views expressed in regard to the influence of the weight of the body are applicable also to talipes varus of paralytic origin. In this affection, at an early stage, and before the foot has lost its flexibility, a simple walking-brace is needed, as in Figs. 19 and 20, to properly direct the action of the weight of the body on the paralyzed foot. At a later period, if this measure has been neglected and the foot has been allowed to become varous and more or less inflexible, the case will require more attention and probably prolonged effort, with multiple straps and adhesive plaster, to carry the foot across the line between deformity and the norm, to the position in which the weight of the body shall be a correcting and not a deforming force.

A PLEA FOR CONSERVATISM IN THE SURGICAL TREATMENT OF DISEASES OF THE RECTUM.

BY CHARLES H. MERZ, A.M., M.D.

It has been truthfully said that such has been the wonderful progress in all departments of medicine and surgery that a man who loiters by the wayside soon finds himself lost in a maze of new ideas.

One of these, and perhaps *the most* amazing new idea, is the salvation of many of our good people's lives, and the assuring of physical, mental, and moral well-being, by recognizing and treating such neural disorders as arise from the rectum. The desire to find the cause of the patient's ailment leans, in many cases, all one way; it leans to

a most curious and diligent search for every ill that human flesh is heir to, in the unoffending rectum—and in many of these cases blind oblivion scatters the poppy over all other evils that might in any way work injury to the system. Any other source of distress and mischief is, by some men, wholly ignored. If by common courtesy a man or a woman be granted the possession of a few supplementary organs, these have no special function or disorder of their own; all are subservient to the rectum—that (etymologically speaking) "straight" organ. The unfortunate individual that to-day complains of headache, indigestion, neuralgia, dipsomania, kleptomania, or any other ill in particular, is liable to be entangled in the net of the "Orificial" surgeon—who finds the rectum a little congested, the veins a little dilated, or the mucous membrane a little relaxed—and he is advised at once to submit himself to an operation. After having once had such a thing as an operation suggested to him, the unfortunate individual's mind becomes constantly fixed upon this more or less nasty mystery and its cure. He is seen to grow apprehensive, and the fetters of morbid fear are fastened about him in a manner that he never knew before.

I have a far more exalted and honorable opinion of the sphere and mission of medicine and surgery than to regard it as essential to its existence that the rectum of man or woman should be made an object of experiment, malpractice, or common "butchery," or that it should be made, at the rate of one hundred dollars a trial, the sole point of attack in every effort made at the cure of disease.

I refer more particularly in the present instance to what is called an "operation" devised for the relief of all forms of rectal ailments. This operation has but recently been brought to public notice, and, as in the case of every other "fad," it has found some enthusiastic supporters.

The operation, as now advocated and practiced by "Orificial" specialists, consists, briefly described, in placing the patient in a suitable position; paralyzing the sphincters by digital stretching, permitting the hæmorrhoids or prolapse to descend; by the use of scissors and forceps dividing the mucous membrane at its junction with the skin around the entire circumference of the bowel; the exposure of the external and internal sphincters by dissection; the detachment of the mucous membrane and attached hæmorrhoids or fistula; the pulling of the membrane down, its division transversely, and attachment of the remaining portion to the margin of the skin. The piles or fistula are thus removed.

Such is a brief *résumé* of the more important successive steps in performing this wonderful operation that has attracted so much attention of late. This procedure—or operation, if it may be so called—is under warm discussion at home and abroad. I beg to state that I have never performed the operation, and I take pleasure in saying so. It has not been from a lack of opportunity of experimenting with the plan, that I have ignored it, but from the fact that other modes of treating rectal diseases have been found far preferable as being equally effective, far safer, and less brutal.

If the question is one of curing the patient or leaving him with a severe stricture of the rectum—depending for even so poor a result upon getting union of the cut surfaces by first intention—I say avoid the operation.

I beg to ask these brilliant "Orificial" operators who practice this operation, to state in how many cases they are able to secure a primary union in this plan of cutting? Just what percentage of their patients have succumbed to exhaustion, hæmorrhage, or septicæmia?

Failure to obtain primary union—indeed a very doubtful matter—means, beyond any possible denial, severe stricture of the rectum. That this result has frequently happened, cannot be denied; there is too much evidence to prove it. I have under my care at the present time a number of unsuspecting individuals upon whom this operation has been made, and I am treating them for well defined stricture of the rectum.

If the reader feel disposed to investigate, let him ask these specialists as to the happiness of the results in a case in which the primary cutaneous incision is, by accident, made a little too far out on the cutaneous surface, and the mucous membrane has to be pulled down to meet it? Even if union by

first intention occurs under these unlikely conditions, ask them what they expect to do with the mucous outlet of the alimentary canal that has been made to take the place of the natural muco-cutaneous outlet? Is this surface ever free from erosion and ulceration?

The Pratt operation has been most thoroughly tried both abroad and at home—and it has proven to be, so far, but a "money-making fad." It has given some satisfactory results, it is true, but these have been the exception and not the rule. How many who so strongly advocated it at first have, after a few trials, abandoned it and returned to the older, safer, simpler, and more humane methods! The operation is a beautiful one on paper, but it is a most sorry one in execution.

That I may not be misunderstood, let me say that I do not condemn all operations for hæmorrhoids, but that I do condemn this particular one as being no more than a poorly devised plan to cater to a depraved or morbid desire upon the part of the public to undergo some new, unheard-of operation. Better for the majority of hæmorrhoidal sufferers that this plan had never been devised than that they should be mutilated and injured in the manner described.

It is not the surgical work of "discreet and able men" that the public has to fear, but it is the danger from that vast army of small imitators who, thirsting for surgical fame, operate with a temerity bordering on recklessness. A thirst for operative notoriety, and a willingness to achieve it under any and all circumstances, lead them to misjudge the value of the lasting fame of conservatism of the human anatomy. If these men were to "consider more and cut less," the general public would be better off.

No man in medicine is more worthy of great honor than the true surgeon, but to be a surgeon one must be more than an "anal specialist." A narrow-minded medical man, working for dollars and cents only, will advocate any operation that will secure the coveted result—but he does not work wisely, nor profitably either, as regards his own or his patients' interest.

The operation of dissecting out the rectum from its attachments, cutting it off, and sewing the remaining portion to the cutaneous surface, is (speaking in a very candid manner) both brilliant and brutal; but the same good results are seldom obtained by others as are claimed by the originator of this plan of cutting. The percentage of cures claimed in the face of absolute, direct failures, strikes one as being, singularly untimely. One cannot help thinking that a majority of these cases that are subjected to a positively dangerous operation would be successfully relieved by far less heroic measures.

While I have no possible grudge against the men who perform this operation, I have very positive views as to its inutility, and I do not hesitate to pronounce it a procedure on a par with those in vogue with the traveling "Negro Minstrel Electric Oil" peddler; the "Test your eyes free" wandering celebrity; the "jabbers" that four times a day, for months at a time, willfully and cruelly damage their patients with a syringeful of some decoction, and finally graduate them as "Knights of the Golden Arm;" the Viviopaths; the Physio-medics; or the Metaphysical or Divine healers—all superlative exemplifications of modern genuine quackery.

Surely great "advances" must have been made to have justified this wonderful operation in the eyes of men who will tell you that a millionth of a millionth of a grain of common table salt will produce 1,349 different symptoms, including headache, vomiting, cardiac and lung trouble, besides disturbances of sight and hearing, and so on. I say again that I can only class it with the men who use such articles as I have recently seen offered for sale in a Homœopathic Catalogue: The following "morbific" products, "nosodes" offered in "high potencies": "Lice insect," any of the three varieties—"serpents," "tarantulas," and "crickets." You can buy bottled sunlight, maybe the sun himself; or you have the choice of the blue rays, the yellow rays, bottled galvanism, or faradic electricity, etc. "Snow" and "ice" or "moonlight" or the "east wind" are at your command for ten cents "a graft." It is not the germs or material particles, but the disease itself—"Bright's," catarrh—anything you will; but you can buy also the "pus" from a "carbuncle," from "Pott's" disease,

etc. You can buy "Brahma" himself, it seems; or, if you are sad, you can have for ten cents the "tears of a young girl in great grief and suffering;" the "salt of the brain secreted from a gentleman's scalp," with the perspiration; "a silk handkerchief eaten by a cow and taken from the stomach in a hard ball; during the three years she never had a calf." That the American people love to be humbugged and befuddled goes without saying, in the face of such a display of common filth and refined idiocy.

The operation under consideration, in the light of all medical learning, is decidedly unscientific, brutal, and hazardous, since resection is always a dangerous procedure on account of coexisting inflammatory infiltration of the surrounding tissues—contraction often giving rise to fatal hæmorrhage.

While I do not doubt that great advances have been made of late years in the department of rectal surgery, and that the field of operative interference has been undoubtedly enlarged, I claim that such a major operation upon the rectum as has been mentioned should be reserved for malignant cases only.

When a man or a woman is suffering from the consequence of fæcal or urinary fistula, or when there is found a malignant process that threatens to destroy health, comfort, or life, surgical aid is imperatively demanded; but when operations that involve danger to life, such as this operation, are undertaken for the possible relief of some vague, uncertain nervous symptom, or because there is *nothing else to do to keep the patient under treatment*, then such operations are not only wrong but absolutely criminal.

When a man is irritable, nervous, or insane, can any honorable physician promise him a cure of his afflictions by amputating his rectum? When a child, from lack of development of the central nervous system, shows positively incurable symptoms, can any physician conscientiously promise a cure by resection of a portion of his normal rectum?

I have heard it claimed that there is a most intimate connection between the brain and the rectum. In the light of all that has been claimed for this operation, I have been tempted to believe that this "relation" has in some cases amounted to a real transposition or substitution of the organs. These operators should remember that "charity commences at home." If this were borne in mind, I believe there would be fewer reported cases of removing the rectum.

In reporting these cases, too often the word "successful" means no more than that the patient did not die on the table, and it seems to have little or no reference to his subsequent condition or to the supposed condition for which the operation was made.

Do you know to what extent and for what purposes this indiscriminate "Orificial surgery" is proposed and practiced? I do not. The Lord only knows. Who can tell the number of cases in which the rectum has been cut out—extirpated, if you please—for the relief of disease that existed only in the mind of the unfortunate patient? Who is able to write the histories of the cases in which a perfectly healthy rectum has been removed, without even a trace of improvement in the general condition of the patient? On the contrary, how many patients have had life rendered miserable through stricture and ulceration, all for the sake of gratifying the ambition of some operator? This fashionable craze can be equaled only in ghastliness and cruelty by that of removal of the uterus.

Let me say that I believe that the surgeon who performs a rational operation for the purpose of saving or prolonging human life, does a noble act; but the man who performs an operation of this gravity when many other expedients would be equally efficient, should not be surprised at drawing censure and condemnation upon himself, and that doubts should arise among his professional colleagues, whether of his own school or not, as to the purity and honesty of his motives, or, at all events, as to the soundness of his judgment.

There are men engaged in this objectionable work of extirpating the rectum, who a short time ago were stretching and slitting the cervix uteri, and are now sewing them up again at a double fee. They are the same individuals that advise every woman unfortunate enough to have a fibroid of the uterus, no matter how small or how harmless, to have it removed—it or them—the fibroid,

uterus, and all. They are the same men who advise every case of endometritis to be subjected to the curette, and perhaps later to the undertaker.

A man or a woman has an indisputable right to his or her rectum, and should be deprived of it by the meddlesome "Orificial" surgeon only when it is proved clearly that, through disease that is otherwise incurable, health and life are endangered. The time has come when every man or woman should say to these selfish, reckless operators who seek under every possible excuse to deprive them of a part of this particular organ: "Hands off!" I doubt if the time will ever come when, for such trifling ailments as have been an excuse for this operation, any surgeon will advise the dissection and removal of a distal portion of the urethra. Yet this would be as justifiable as the other procedure under many circumstances.

As said before, every failure to secure primary union, after this operation, means severe stricture for the patient. In no other operation is this primary union necessary to be sought for. The fault in the majority of the cases does not lie with the operator, but with the operation. The eagerness with which the operation has been urged upon the public serves to show the palpable exaggeration of the claims for wonderful cures.

It seems that a great deal of writing has been done concerning a small point in operative surgery; but I humbly ask if we, as progressive physicians, are expected to countenance and lend our approbation to every "quack" operation that is brought to our notice?

Many of the readers of this article have no doubt been asked, as I have been, why I do not make this operation, that has added so much to the popularity of the operator and has increased his revenue many fold. My answer has invariably been, that I do not believe it is a justifiable operation under any other than extreme conditions, and I state as my reasons those given in the present article.

There are but few cases in which I do not feel that I have reason to be thankful that I have avoided having anything to do with so questionable a procedure.

Sandusky, Ohio.

THE ABUSE OF SPECTACLES.*

BY F. D. MARTIN, M.D.

I am prompted to select this subject because of the flagrant evil results that have come under my observation from the indiscriminate and injudicious prescribing of spectacles.

It is not the intent of this paper, even though time permitted, to review the field of optics with reference to refractive errors as exemplified particularly in the misuse of lenses; but merely to call attention to facts of which we are all aware, but which we do not take sufficient pains to correct.

Each town and hamlet has its store where spectacles are kept and prescribed by incompetent men; each jewelry store has its journeyman workman who undertakes the responsibility of correcting errors of refraction, sending forth people with uncorrected or overcorrected ametropia. The fact that the patient appreciates an improvement, is sufficient evidence to the novice of the correctness of the adjustment, and sufficient guarantee to the buyer that the glasses are adapted to his needs. In many cases the patient is left to his own judgment to decide upon the glasses to be worn; and, while the selection is not in all cases a wrong one, yet the incorrect choosing is so frequent as to constitute an evil of alarming magnitude. To the careful observer this is so evident as to call for an immediate correction of the system in vogue.

The law undertakes, and not without a certain degree of success, to regulate other branches of medical practice, requiring a certain proficiency and a certificate of qualification from recognized boards. The same requirements demanded by the State to protect its people from the indiscriminate practice of medicine at the hands of charlatans and incompetent and unscrupulous pretenders, should be enforced for the protection of people who seek a correction of an anomaly of refraction.

Too little importance has been attached by the profession in general to the evil consequences resulting from the irresponsible attempts at the correction of refractive errors.

* Read before the Northern Ohio District Medical Society, Sept. 24, 1892.

More attention on our part to this branch would obviate in a great measure the harm being done by the jeweler, his journeyman, and the man who hawks about the street his optical goods. While it may not be within the province of the general practitioner to correct all cases of error, yet to be able to determine those cases requiring an extended and detailed examination by the oculist should be a part of his knowledge and equipment. A protection is thus given, and an insurance against many evils that have arisen from injudicious spectacle-prescribing.

More information from the physician is due the public than is accorded; it should be as much a part of his knowledge to be able to protect the eye and prevent its abuse, as to treat with medical proficiency any other diseased organ.

The community has a right to claim of us protection from the impositions of the unlicensed and inexperienced. This branch of practice is to an alarming extent in the hands of the incompetent in smaller and even quite large towns; and the city is no exception. People are accustomed to go to the jeweler for their glasses, simply because the physician has considered this branch outside of his domain.

While I am not a believer in the association of refractive errors with the production of obscure reflex phenomena to such an extreme extent as has been pointed out by some observers, yet I believe that optical derangement is in many instances an important factor in the production of local and constitutional disturbances—so much so as to demand recognition and treatment at our hands, at least so far as to prevent the further aggravation of the case by the gross ignorance of an unskilled optician.

The two extremes in spectacle-prescribing have already been seen. At one time but little was known of optical principles as applied to the correction of refractive errors, and consequently impairment of vision dependent upon a false construction of the optical apparatus remained uncorrected or imperfectly corrected. With increase of knowledge came an increase of votaries; a new field was opened, and to it flocked the skilled and the unskilled. The people were unable to determine between the scientific and the unscientific. The pretender's door was open and his business unrestricted. Optical companies innumerable sprang into existence, and a market for their products must be had. Country stores, jewelry shops, and traveling opticians placed their goods with the people, with an utter disregard—in fact a complete ignorance—as to the consequences. As a result of all this, an incalculable amount of injury has been done and is still being done.

Perfect vision depends on normal structure and perfect physiological action of the optical apparatus; any deviation shows its effect in perverted function—either directly in light-perception, indistinctness of definition, or remotely by reflex phenomena.

A patient with impairment of vision, unless of marked inflammatory character externally, seeks the optician of the jewelry shop, and a slight improvement is had on the spot by the glasses adjusted—which is true even in eyes of normal structure and perfect vision. No further argument is needed to induce the applicant to wear the glasses. The fitting has been done regardless of any optical principles; no attention is paid to ciliary tonicity or ametropic latency. Once purchased, the necessity of wearing the glasses is considered imperative on the part of the patient. Soon the improvement noticed is lessened, and then pain and reflex phenomena develop. A visit to the counter is again made, and the optician vouchsafes the assurance that the eye will soon accommodate itself to the new order of things and ultimate relief follow. And thus the case goes on until the disturbance is so great that the physician or oculist is consulted and the cause pointed out, but in many cases not until a great amount of damage has been done.

A case in mind I have now, of a little girl 10 years of age who came under my care a short time ago. The mother's story was that about January last the child's right eye became somewhat reddened. She was advised to get a pair of protectives, the *jeweler* was sought, and blue glass adjusted. Gradually the eye grew worse, and the assiduous use of the glasses in school was necessarily abandoned. The eye continued to grow worse, and the general health was much im-

paired. When she came under my attention, with the glasses on, the lids were suffused and the ocular and palpebral conjunctiva much swollen; phlyctenula near the inner corneal margin; general haziness of the cornea; inability to read $\frac{6}{60}$; photophobia; extreme lachrymation; increased tension and pain. The cause of the trouble was at once apparent, or at least a cause of its prolongation was evident. In the adjustment of the glasses the lens encroached so closely as to interfere with the excursion of the lid—each movement brought the latter with considerable pressure in contact with the former—thus acting as a continual source of irritation, with the results detailed. Discontinuance of the use of the glasses, and application of mild remedies, resulted in subsidence of all inflammatory disturbances, complete relief from pain, and disappearance of corneal haziness. Twenty-four hours after removal of the glasses the improvement was strikingly marked, and at present writing the appearance of the eye is normal to a superficial examination. Test-types show, however, vision to be only $\frac{6}{24}$, which is explained by a nebula in the centre of the pupillary tract, due evidently to the prolonged use of the protectives.

This case is only one of many, and indicates the existence of an evil that demands at our hands more than a passing notice.

A lens, even though of correct refractive power to obviate an optical error, fails to meet the indications for its use if imperfectly adjusted. How many cases each day do we see of people wearing glasses the optical centre of which is from one to three millimetres either to the right or to the left of the pupillary centre, thus converting a spherical medium into a lens having a prismatic effect, and producing diffusion of retinal rays and eye-strain with its direct and consequent reflex phenomena of varying character and degree.

How frequently we find a presbyope with glasses either too strong or too weak; and again, a presbyope with conjoined hypermetropia wearing only the lens corresponding to the presbyopia; or a myopic case where the presbyopia has overcorrected the myopia. Then again, we find people of the presbyopic age urged to wear glasses of from one to two dioptrics overcorrection, in whom incipient cataract is manifest, the existence of which was unknown to the prescriber, who sought to overcome the partial obscurity by increased strength of lens.

But, perhaps, of all classes, those who suffer most from indiscriminate and injudicious prescribing are the school children. Who can say how many cases of monocular amblyopia might have been prevented? How many children have been considered dull—in many instances being obliged to pursue their studies under great disadvantages, or even to give them up altogether—because of improper correction, due to faith in an unskilled optician!

The importance of the observation and correction of even mild degrees of astigmatism has been fully established. Dr. Schweinitz, in his report on "One Hundred Cases of Astigmatism Contrary to the Rule, and Associated Symptoms," considers that "useful results follow the correction of the least degrees of measurable astigmatism—results which are not obtained when their correction is neglected; and that the mere presence of so-called normal central vision, according to the ordinary test standard, does not preclude the possibility of low degrees of astigmatism being present, which should be sought out and corrected; that ocular health is conserved by such careful and thorough measurements of astigmatism, and hence indirectly general or so-called reflex disturbances are alleviated."

CHRONIC PROSTATITIS, IRRITABILITY OF BLADDER AND URETHRA, WITH INCONTINENCE OF URINE.

BY J. F. GRAHAM, M.D.

I have recently employed sanmetto in a case of chronic prostatitis and great irritability of bladder and urethra, with incontinence of urine, and continued its use until the patient reported at my office entirely cured. Two months have elapsed, and no return of the malady. The case may be of interest in view of the fact that the patient was treated unsuccessfully for a period of six weeks in a leading hospital of this city for the same trouble before reporting to me. I regard sanmetto as a remedy *par excellence* in all diseases of the genito-urinary organs.

Washington, D.C

Correspondence.

A DINNER TO THE DETROIT MEDICAL AND LIBRARY ASSOCIATION.

Dr. George W. Stoner, of the Marine Hospital, the retiring President of this Association, gave the members and many representative members of the medical profession a complimentary dinner on the evening of Sept. 26th, at the Wayne Hotel. The attendance was about one hundred and fifty, and after the dispatch of business the enjoyable dinner placed the guests in a mood for the toasts and responses which added a mental spice and sauce to the material entertainment.

The officers elected were: President, Dr. F. W. Mann; Vice-President, Dr. George E. Frothingham; Secretary, Dr. D. M. Campbell; Treasurer, Dr. Angus McLean; Librarian, Dr. G. V. Beclaire; Member of the Advisory Council, Dr. H. A. Gerry; Member of the Publication Committee, Dr. C. W. Hitchcock; Member of the Library Committee, Dr. E. S. Sherrill; Member of the Committee on Finance, Dr. F. Huson.

A string orchestra aided in promoting the assimilation of the following menu:

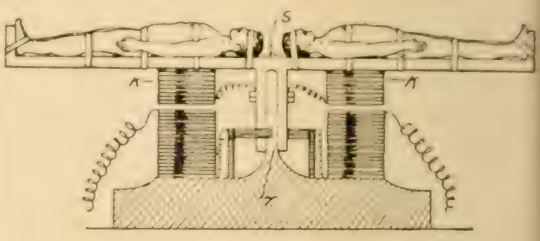
Blue Points.
Consomme Cavour.
Sauterne.
Boiled Whitefish *a la* Mexicaine.
Potatoes Parisienne.
Celery. Olives.
Escalloped Oysters.
Tenderloin of Beef, larded.
French Peas.
Claret.
Boned Turkey, with Aspic Jelly.
Cold Sugar-cured Ham. Cold Beef Tongue.
Mayonaise of Chicken.
Vanilla Ice Cream.
Assorted Cake. Fruit.
Coffee. Cigars.

The toasts and responses were: "The Doctor and the Public Schools," Dr. David Inglis; "Epidemiology," Dr. J. J. Mulheron; "Modern Surgery," Dr. Donald Maclean; "Medical Perversity," Hon. Cornelius J. Reilly; "The Evolution of the Specialist," Dr. Edward W. Jenks; "The Detroit Medical and Library Association," Rev. W. W. Carson; the Apologia, Dr. F. W. Mann.

A MODIFICATION OF ELECTROCUTION.

Editor MEDICAL AGE.

DEAR SIR:—I send you herewith a drawing of a machine for executing criminals, which perhaps is new. The machine consists of: A beam on which the criminal is placed (see drawing); the under side of this beam carries an armature (K K), also a thimble (S); the thimble revolves on a stem (T) placed in the middle of the Field magnet, thus placing the armature in proper relation to the magnet. When the current is closed,



the beam carrying the criminal is put in rapid motion. His head being at the centre, the centrifugal force will throw the blood away from the brain to the extremities, producing cerebral anæmia, which, if continued, will cause fatal syncope. If the head be placed at the outer end of the beam, and the feet at the centre, death will take place by coma. The man may take his choice.

W. W. FRENCH, M.D.

Ft. Branch, Ind., Sept. 13, 1892.

"THE BICYCLE."

Doctor Peters is evidently one of those doubting Thomases—or doubting Peters, I might say. He does not believe that a 30-mile ride on a bicycle ever injured any woman. Now, it would be safe to say there are quite a few who have never tried the experiment. He does not believe enough examinations have been made to warrant an opinion on the subject. Now, what would be the use of presenting our learned and excellent friend with an elaborate list of statistics? The presumption is that he would still be incredulous. If we might be allowed

to make a suggestion, the only way to escape from the horn of this dilemma, Doctor, is to make an investigation for yourself, and then all doubts would be settled at once. Possibly the Doctor has some intimate lady friends who are bicycle-riders; and if we have caused any offense, we are ready to apologize, for, like Uriah Heep, we feel awfully 'umble and would never wish to offend anyone intentionally. The Doctor seems to be a *little* sarcastic in alluding to our sandy regions. Very true, we have considerable sand and sawdust up here, but not many lady bicyclists; the ladies seem to be too well brought up, to indulge in any such glaring irregularities. "Vale!"

G. A. WILLIAMS, M.D., *etc.*, *etc.*

Bay City, Mich., Oct. 3, 1892.

WHY PHYSICIANS SHOULD SPECIFY.

There are many reasons why the doctor should specify upon his orders and prescriptions the name of the manufacturer whose product he favors, but the following extract from a letter to a prominent manufacturer furnishes an additional one:

"We would like to handle your laboratory products and surgical appliances with our trade, but the margin you afford us is not sufficient, so every time your make is asked for we work off something else that affords us a better profit if we can. This often occurs. If you can either allow us a better price, or charge the doctor more, we should like to buy from you; otherwise we must continue hereafter as we have done in the past."

The physician and the retailer should appreciate the fact that the manufacturer is being continually pressed either to establish a higher price to the doctor, which will afford the jobber an extravagant margin, or to so cut down the selling prices to the jobber as to compel the manufacturer to cheapen the quality of his product in order to enable him to do business at any profit whatever. The doctor can remedy this to a great extent by insisting that his orders and prescriptions be filled as specified, and accept no substitution.

MEDICUS.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

B. W. PALMER, A. M., M. D., Editor.

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DETROIT, MICH., OCT. 10, 1892.

Editorial.

CULTURE AND PROFESSIONAL SUCCESS.

In the London Lancet, Sept. 17, 1892, the editor comments on a paper on this subject appearing in the September number of the New Review from the pen of the late Sir Morell Mackenzie. A strong plea is made for the advantages of culture in the classics of ancient and modern literature for the medical practitioner.

All educational methods are being subjected to the most stringent scrutiny, and the medical profession has been, and still is, engaged in revising its curricula and extending its period of study. Hence, an article like that cited, raising the great question how far general or "liberal" culture, as contrasted with special, technical, and professional education, is conducive to professional efficiency and success, is worthy of careful attention. The article is strongly in favor of a wide general culture as the best preparation for the more special training which every profession demands from those who aspire to enter it. The author's grounds are various, but they may be summed up under two heads: first, that such culture confers breadth and flexibility of mind and renders the acquisition of special knowledge easy; and, secondly, that it develops a knowledge of human nature, and hence assists in enabling us to treat our clients or patients, not as mere "cases," but as complex, sensitive, and highly organized men and women.

This issue, ancient as it is, appears likely again to be fought out in our own day. There is a strong utilitarian wave of opinion now prevalent, and it is becoming generally assumed as an axiom that all training for a profession should be directed to the special needs and work of that profession, and that

liberal studies, however pleasant or refining, must, in the stern struggle for existence, make way for subjects more practical and more immediately and obviously useful. From these causes arise the sacrifice of Greek, the limited study of Latin, the ignoring of English literature, and, on the other hand, the concentration of attention upon physical and biological science.

We are no advocates of any abortive and anachronistic attempt to turn medical students into classical or literary pedants as a preparation for the work of the hospital ward or the consulting-room; but we would remind those most imbued with the spirit of the new era that the preparation of the intellect for the reception of knowledge is an object hardly less great and urgent than the character of the knowledge which is to be imparted.

We all admit that some such preparation is indispensable. The greatest enthusiast for science will hardly affirm that chemistry, physics, and biology afford a sufficient basis for an all-round intellectual development. They are no doubt most important, but their successful prosecution would still leave the student ignorant of the history of his race and of many of the highest and noblest achievements of the human intellect. In medical education we desire, with as little waste of time as possible, to bring trained and disciplined minds to bear on the problems of disease; and the question is, in what manner this can be best effected.

Many will accept this putting of the case, and will ask with derision how the differential calculus, the subtleties of Greek grammar, or the Categories of Kant are likely to be helpful. A sneer of this kind, however rhetorically effective, is not conclusive. The medical student needs strength and grasp of mind; the capacity to note resemblances and differences; the power of determining what amount of evidence is sufficient to warrant a given conclusion; some capacity of reading character, so as to estimate correctly a patient's statements and to eliminate the personal equation. He needs to be cautioned against haste, inaccuracy, prejudice and preconceived opinions, fallacious reasoning, confused or contradictory ideas, want of tact, and many other things.

These are formidable requirements, and the question is whether they can be met by any process less tedious and troublesome than that involved in a good preliminary education. The great danger of medical education at the present day is that raw youths with wholly unformed minds and destitute of any correct ideas regarding observation, evidence, and reasoning, should be set to dissect snails, mussels, and frogs, to look down microscopes, and to handle test-tubes, and to imagine that little else is necessary. If such methods should extensively prevail, we believe the results would be quite as disastrous as those which flow from an excessive devotion to the Greek digamma or the higher geometry. Cardinal Newman says in one of his works that we have ample proof that the old methods of instruction by means of the classical languages and mathematical studies are capable of producing flexibility and grasp of mind, and that we have no proof that any other methods are adequate for this purpose.

Apart from purely professional work, we have to consider how best we can promote that mental attitude which helps the practitioner to understand his patient not only as the subject of disease, but as a human being. In the article alluded to above, it is justly observed that professional success depends not only upon the power of giving good advice, but upon the capacity of so influencing our patients that they will be inclined to follow that advice when given. Many of the greatest practitioners of medicine have a magnetic influence in this way; but for those not thus exceptionally endowed, there is no means of acquiring this power so likely to be successful as a wide knowledge of different subjects—in other words, a good all-round culture. This should enable its possessor to understand different types of mind, to enter into their point of view, and to sympathize with their various difficulties and apprehensions.

THE ÆTIOLOGY OF MALARIA.

If charity covers a multitude of sins, the word malaria covers many undeterminable conditions of maladies which are conveniently grouped under that head.

It is stated that the widespread ravages of

malaria possess the unenviable position of being responsible for dispatching to the bourne from which no traveler returns, more human beings than any other malady known.

The London Lancet having instituted a commission of inquiry into the subject of so-called malarial fever in tropical Africa, an active discussion of the ætiology of malaria has sprung up. The conclusions reached are: Recent bacteriological research seems certainly to point to a micro-organism, a polymorphic hæmatozoön, being concerned in the production of malaria in most parts of the world. At any rate, the researches of Laveran in France, of Marchiafava, Celli, and Camillo Golgi in Italy, of Vandyke Carter and Hehir in India, and Councilman and Osler in America, all result in a common agreement that such is the case; and the examination of the blood of a few patients who have returned from various parts of Africa also points to the same hæmatozoön being at work in that continent. On the other hand, it will not do to ignore the fact that there are observers, and observers of no mean order, who in India, in America, and in Africa deny even that malaria exists as a disease *sui generis*, and who maintain that the phenomena witnessed in, for instance, intermittent fever are due either to errors of personal hygiene or to the action of "chill."

SHALL THE PROFESSIONS BE REGULATED?

Apropos of the discussion excited by the appointment of a committee, at the last meeting of the American Medical Association, to revise the code of medical ethics, it may be of interest to our readers to learn the opinion of a disinterested observer who discusses the regulation of all professions.

N. S. Shaler, in the Engineering Magazine, writes at length on the regulation of the professions, and concludes that, while many others may do without it, the medical profession need it. He believes, for somewhat different reasons than those which determine the protective unions of hand-laborers, but with substantially the same motives, our professional classes are seeking to band their members together and to protect their occupations against the degradation which comes from the invasions made by people who are really unfitted for the employment they seek. These learned walks of life are not in any way threatened by capitalists. Their place in the community is fully established, except for the risk which may come from quackery. It seems to many of these gentlemen that the law may fairly come to their aid to save the public from the losses which may accrue from the often captivating pretenses of uneducated impostors.

So far as the practice of medicine is concerned, including in the category both physicians and apothecaries, the argument in favor of legal control seems to have sufficient popular support at present to justify a certain departure from the principle which dictates freedom of contract as the basis of the relation between employer and employed in all the walks of life.

The man who is taken suddenly ill, or who has met with an injury, is not in a position to form judgment based on reasonable inquiry as to the professional education of the medical man from whom he seeks help. The sufferer has more than his property in jeopardy; he may pay for an error of judgment with his limb or with his life.

Owing to these peculiar conditions, the medical art has come to be popularly regarded somewhat as a branch of the public service, and its members are held to require some form of commission, in effect similar to that which is given to the officers of the law.

An argument to the same effect could be made in favor of sanitary engineers, for they too have life and health in their keeping, and may by ignorance inflict injuries for which no court of law can award adequate compensation.

CONGRESS OF MEDICAL CLIMATOLOGY.

It is proposed to arrange in connection with the Columbian Exposition a World's Congress of Medical Climatology, to consider the climates of the world, their effects upon health and disease, and climatology from a medical standpoint.

The committee in charge have issued the following announcement:

"The year 1893 will be made memorable by the Exposition that the world will hold in Chicago. There will be gathered not only the exponents of the industrial wealth of the

world in all the forms of material progress, but the advances made in art, science, and civilization will be set forth.

"A series of congresses representing all of the departments of thought and scientific investigation is a true, even an indispensable, part of a World's Exposition.

"In accordance with this idea, the World's Congress Auxiliary has been organized in connection with the World's Columbian Exposition, and has been recognized and approved by the Government of the United States. Among the assemblages to be convened, what more fitting than that the Department of Medicine, the great healing art, with its many divisions, should be conspicuously presented? What more opportune time could have been selected by the climatologists of the whole world to meet and compare their observations and views on the different climates of the earth, and their effects upon humanity and the diseases to which flesh is heir?

"With that object in view, a local committee of arrangements has been appointed by the World's Congress Auxiliary, and an advisory council will be selected from those eminent in this department in different parts of the world, to arrange a World's Congress of Medical Climatology, to be held at Chicago during the Exposition season of 1893.

"The design is to hold this congress at a time convenient for those who will attend the congresses of the other divisions of the Department of Mecicine, which are assigned to open May 29, 1893. This early date was chosen to accommodate those who will desire to attend the Medical Congress to be held in Rome in November of next year.

"The movement is, as yet, in a formative stage, and much thought must be given to it before a detailed programme can be formulated.

"The following topics have been suggested, and others will doubtless be added before the final programme is announced:

"The Leading Characteristics of the Climates of the Various States, Countries, and Sections of the World.

"Diseases Produced by the Climatic Peculiarities and Weather Changes in the Various Countries.

"Relation of Climate to Consumption. Climates in which Consumptives Recover or are Materially Benefited.

"Health Resorts. Special Features.

"Relation of Climatic Changes to Epidemics.

"Changes of Climate due to Cultivation. The Effects of the Destruction of Forests, and Other Changes incident to Civilized Life.

"The Relations of Diet and Climate.

"What May be Done to Improve or Modify Climates for the Promotion of Health and Comfort?

"Geography of Carcinomatous and Sarcomatous Diseases.

"Geography of Bright's Disease.

"Climatic Factors which Produce Epidemic Influenza.

"Relation of Climate to Rheumatism.

"Relation of Climate to Catarrhal Diseases.

"Relation of Climate to Longevity.

"Waters and Climate.

"Climatic Effects upon the Eye.

"Relations of Climate to Diseases of the Ear.

"The Effects of Sun Spots upon Climatic Conditions.

"What More Can the Weather Bureaus do to Aid Climatologists and Disseminate Climatological Knowledge?

"Comparison of Climatic Differences as Manifested by Similar Diseases in the North and South Temperate Zones.

"Climatic Relations to Remittent and Periodical Fevers, and to Continued Fevers.

"Climatic Relations to Malaria.

"Acclimation: Disorders Produced by Migration.

"It is the purpose of the committee, with the advice of the council, to arrange for a report from each State and country of its climatic peculiarities. The health resorts of each State and section will also be properly represented.

"This congress will afford a most favorable opportunity to compare the climates of the various States, countries, islands, and continents of the whole world, from a medical standpoint, by delegated representatives of the various localities.

"The changes that occur in climates, and which possibly attend the great epidemics, merit world-wide attention.

"If the effects of climates upon the one disease, consumption, can by such comparison be fairly ascertained and approximately settled, great good will result to afflicted humanity.

"The bearing of climate upon such diseases as rheumatism, catarrh, cancer, Bright's disease, and generally upon health and lon-

gevity, will form especially interesting questions for consideration in the congress.

"The committee would be pleased to have suggestions as to topics and modes of proceeding, as well as the names of those who may take part in the discussions. Proposals for membership of the advisory council are also invited.

"All communications should be addressed to the chairman of the committee.

"T. C. Duncan, M.D., Chairman; I. N. Danforth, M.D., Vice-Chairman; L. B. Hayman, M.D., Secretary; J. D. Hartley, M.D., A. K. Crawford, M.D., F. D. Marshall, M.D., J. B. S. King, M.D., J. A. Robinson, M.D., S. A. McWilliams, M.D., A. L. Clark, M.D. —*Committee of the World's Congress Auxillary on Medico-Climatology.*

"World's Congress Headquarters, Chicago."

PECCAVI.

In the last number of THE AGE an article entitled "The Management of Cholera," by Dr. G. Archie Stockwell, F.Z.S., was in error published as original. The paper was excerpted at a moment when THE AGE was due to go to press, and, owing to the pressure and hurry of the moment, the credit to the Scientific American, from whose editorial columns it was taken, was inadvertently omitted.

Not desiring to steal the Scientific American's thunder, the editor of THE AGE wishes to make the *amende honorable* by informing the readers of THE AGE of these facts, and can only say to the Scientific American, *Peccavi!* and plead that to err is human, to pardon divine.

DRUG HABITUATION.

Dr. L. W. Baker, in the Alienist and Neurologist, says: The facility with which nervous processes repeat themselves constitutes the organic basis of habit, the nerve-cells becoming fixed in the direction in which they are constantly exercised. The continued use of drugs—notably alcohol, chloral, and opium—may establish an abnormal condition of the nervous centres, which in itself is a constantly recurring plea for their habitual use. In the treatment of drug habituation all the surroundings of the patient should be absolutely controlled by the physician.

Book Notices.

SCRIBNER'S MAGAZINE FOR OCTOBER.

The October number is most entertaining and instructive. In it begins a group of articles on The World's Fair at Chicago, with a picturesque description by H. C. Bunner of "The Making of the White City." A series of illustrations by W. T. Smedley represents the striking transformation taking place. Subsequent numbers will discuss "Chicago's Part in the Fair" and "The Decorations of the World's Fair."

Among the most vivid articles in the Historic Moments' Series is a description, in this issue, by Daniel Denison Slade, M.D., of "The First Capital Operation under the Influence of Ether."

Two articles in the number have a very practical educational value. Edmund R. Spearman describes "The School for Street Arabs," known as the D'Alembert School, which is situated near Paris and has done so much for the solution of the great problem of making something out of the boys whose only home and school have been the city streets.

Another interesting educational article is Walter B. Peet's account of the "Education of the Deaf and Dumb," which adequately explains the curious methods that modern science has devised for educating those whose senses are incomplete.

Other interesting articles are W. C. Brownell's second paper on French Art—this one dealing with "Romantic Painting;" Andrew Lang's contribution to the discussion as to the personality of "Homer;" Paul Leicester Ford's account of some curious entries which he has found in an unpublished diary of Thomas Jefferson, which reveal the personal habits of the great statesman in his every-day life; and a fully illustrated description of "The Launching of Cruisers and Battle-ships," by William J. Baxter, of the United States Navy.

The fiction of the number includes another Story of a Western Town, by Octave Thanet, entitled "Tommy and Thomas," which describes the rise of a Western politician (illustrated by A. B. Frost); Bliss Perry, the author of "The Broughton House," be-

gins an amusing story of life at Mount Desert, entitled "Salem Kittredge, Theologue."

THE ENGINEERING MAGAZINE FOR OCTOBER.

This number contains many articles of general interest: "Industrial Development of the South," R. H. Edmonds; "Shall the Professions be Regulated?" Nathaniel S. Shales; "Bridge-building in America," T. Kennard Thomson, C.E.; "Industrial Decadence in Germany," James C. Bayles, Ph.D., M.E.; "The Copper Region of Michigan," Frank B. Phelps; "How We Can Guard against Cholera," George F. Shardy, A.M., M.D.; "How Electricity is Measured," Herbert Laws Webb; "The Phosphate Industry of Flôrida," Floyd B. Wilson; "Interior Fireproof Construction," John M. Carrère; "Reciprocity with Canada," Erastus Wiman; "Colonel E. C. Smeed and His Work," Gen. Herman Haupt, C.E.

BOOKS RECEIVED.

OBSTETRICS. By Charles W. Hayt, M.D., House Physician Nursery and Child's Hospital, New York. Pocket size; pp. 190; $1.00. Philadelphia: Lea Brothers & Co. 1892.

MATERIA MEDICA AND THERAPEUTICS. By L. F. Warner, M.D., Attending Physician St. Bartholomew's Dispensary, New York. Being Volume V of The Students' Quiz Series. Pocket size; pp. 224; $1.00. Philadelphia: Lea Brothers & Co. 1892.

THE POCKET PHARMACY, WITH THERAPEUTIC INDEX —A Résumé of the Clinical Applications of Remedies adapted to the Pocket Case for the Treatment of Emergencies and Acute Diseases. By John Aulde, M.D. Pages 204. New York: D. Appleton & Co. 1892.

GONORRHŒA AND URETHRITIS. By G. Frank Lydston, M.D., Professor of the Surgical Diseases of the Genito-Urinary System and Syphilology in the Chicago College of Physicians and Surgeons. Pages 216. Paper, 25 cents; cloth, 50 cents. Detroit: Geo. S. Davis. 1892.

GENITO-URINARY AND VENEREAL DISEASES. By Charles H. Chetwood, M.D., Visiting Surgeon Demilt Dispensary, Department of Surgery and Genito-Urinary Diseases, New York. Being Volume VIII of The Students' Quiz Series. Pocket size; pp. 178; $1.00. Philadelphia: Lea Brothers & Co. 1892.

A MANUAL OF OBSTETRICS. By A. F. A. King, A.M., M.D., Professor of Obstetrics and Diseases of Women and Children in the Medical Department of the Columbian University, Washington, D.C., and in the University of Vermont. Fifth Edition. With 150 illustrations. Pages 450. Philadelphia: Lea Brothers & Co. 1892.

Notes and News.

The Song of the Saddle-bags.—

Faded and rusty, mud-spattered and worn,
Rifled of contents, bottles broken and gone,
Covered with dust, I hang here and mourn
For the days of yore
When the world bowed down to me,
As I sang this song exultingly.
"Now and forever, the whole round world wags
To the rhythmic song of the saddle-bags!"

In palace or cottage, at sea or shore,
'Mid sunshine or storm, I continued to pour
Forth my treasures of healing, frail man to restore
To comfort and health;
Requiring no thanks, accepting no fee,
Again and again I sang joyously:
"Now and forever, the whole round world wags
To the rhythmic song of the saddle-bags!"

Like Napoleon I sigh'd, "The world is small!"
I longed for new races—to conquer them all.
I laughed when 'twas whispered I might have a fall
From my high estate.
I grew pompous and proud and vain as could be,
And continued my song exultingly:
"Now and forever, the whole round world wags
To the rhythmic song of the saddle-bags!"

Oh, 'tis better, indeed, that my hopeless disgrace
Should be caused by a changeable human race
In its boasted progression (for such they've the face
To proclaim it!)—
Old, battered, helpless, I accept the decree,
E'en though I murmur impatiently:
"Never again! The whole round world wags
To a *later* song than the saddle-bags!"

There's a lesson of sorrow for you in my song;
A lesson for all who believe themselves strong.
Remember that pride and great strength belong
To youth, and like me
The subject of jeers you may live to be,
As you childishly moan in your misery:
"Never again! The whole round world wags
To a *later* song than the saddle-bags!"

—H. C. S. in *Indiana Medical Journal* (*Medical World*).

Good Bedside Manners.—

The editor of the National Review has his say on this subject. He says: "The day has not altogether disappeared when a good bedside manner was the great requisite for success. If the doctor was gentle to the women and attractive to the children, his success was assured. This is so to a certain extent today, but it is disappearing at the approach of the dazzling light of modern research. The coming physician is the one who will

demonstrate his ability to combat disease. The man who can prove by actual demonstration that he understands the *antitoxines*, is the one who is coming to the front. An American surgeon of to-day who has astonished a world by his statistics, astonishes alike all those who see how easily he operates without display and with scarcely a handful of instruments. But his patients recover. We would not underrate the value of a good bedside manner; but the scholar is coming to the front. Brains are at a premium."

A Bacteriologist for the City Board of Health.—

The Board of Health of the City of New York has taken a step that is worthy not only of commendation but also of imitation by other boards of health. Heretofore the disinfecting corps has consisted of sixteen laymen. This division has been reorganized and is now denominated the Division of Pathology, Bacteriology, and Disinfection. The chief of the division is to be an expert bacteriologist, and he will have ten physicians under his direction as disinfectors, each of whom has a certain district to oversee. The salary of the bacteriologist-in-chief is $3,000 per annum. Professor Herman M. Biggs, who has been in charge of the Carnegie Laboratory for so many years, has been appointed chief of the division. The appointment is an excellent one.—*New York Medical Journal.*

Dr. Edward Reichert Severs Editorial Connection with the Philadelphia Medical and Surgical Reporter.—

Owing to the increasing pressure of other work, Dr. Reichert finds it necessary to discontinue his editorial connection with the Reporter. He desires to express his hearty thanks to the readers of the Reporter for the many manifestations of their appreciation of his efforts to improve the journal and for their invaluable co-operation.

Rector Virchow.—

Dr. Rudolph Virchow has been chosen as the new Rector Magnificus of the University of Berlin. It is said that he has been twice defeated when standing as a candidate for the rectorship. This has been due to political antagonisms. It is doubtful if, even at the present time, provided Prince Bismarck had still the reins of government, Virchow's friends could have secured for him the votes required to honor the university by putting its most eminent alumnus temporarily at its head.—*New York Medical Journal.*

Medical Congress in Cuba.—

The second Cuban Medical Congress will meet at Havana on October 27th, the date of the discovery of the island by Columbus, who described it as "the most beautiful country which the human eye ever beheld." The official programme of the congress includes such questions as the Topography and Medical Statistics of Cuba; the Ætiology, Prophylaxis, Treatment, and Pathology of Yellow Fever; Malaria and its Relations to Pregnancy and Parturition; Is Malaria the Cause of the Perniciousness of Fevers in Havana? the Skin Diseases Most Commonly Met With in Cuba, etc.

Income of the British Medical Journal.—

It has a circulation of 17,000 weekly, and from its last year's report it appears that upwards of £15,000 were received from subscriptions, upwards of £1,500 from sales of the journal to other than members, and £14,475 from advertisements; so that, after contributing £2,000 toward the general expenses of the Association, there was a surplus for the year of £3,861, leaving a total balance of excess of assets over liabilities of £45,199. Oh ye Americans wielders of the editorial pen and possessors of the scanty pocket-book, do you not envy your English contemporary?

Regulation of the Ice Supply.—

The Conseil d'Hygiène de la Seine, recognizing the possible dangers from cholera and other germs, have forbidden ice to be taken from certain ponds, and have passed resolutions controlling the quality of ice sold in Paris. The prefect of police has been requested to supervise the manufacture of artificial table-waters and to inquire into the purity of waters used in making artificial ice. —*New York Medical Record.*

Therapeutic Brevities.

A New Treatment for Phthisis.—De Renzi (Riv. Clin. e. Terap., No. 6, 1892) publishes a new treatment for phthisis, consisting in the use of iodine internally in the following form:

℞ Aq. dest., 1000 grs.
Iodine, 1 gr.
Pot. iod., 3 grs.
Sodium chlor., 6 grs.

This was first injected into the ear vein of healthy and tuberculous rabbits, and into the subcutaneous tissue of dogs, rabbits, and guinea-pigs. Complete tolerance being established, he tried the remedy on phthisical patients. Hypodermatic injections were first given, and as much as 100 grains were given; these were not, however, well borne, so the drug was then given by the mouth, using from 500 to 550 grains. Nineteen patients, nearly all with advanced phthisis, were thus treated. In all, the treatment produced increased appetite and increased flow of urine. Symptoms of iodism arose in a few instances, but disappeared on leaving off the treatment. The author is of opinion that the results of this treatment will compare very favorably with those of any other at present tried; the body-weight increases, the number of bacilli diminishes in the sputum, and the temperature is reduced to normal.

An Italian Medical Novelist.—Dr. Leonzio Capparelli, who died in March last, in Naples, was a well known physician of that city, and was also the author of several works on medicine and surgery. Five years ago he published a novel entitled "Dr. Pietra," which attracted considerable attention and met with a very favorable reception from both critics and the public. Since his death his daughter has found among his papers the manuscript of another story, called "In Illo Tempore," which she has edited and will have published in Florence. The plot is laid in the slums of Naples during the reign of the notorious Bomba, and is said to be full of interest, as well as realistic in the better sense. At the same time with this, a new edition of "Dr. Pietra," containing all the author's changes of the original, will be published.—*New York Medical Record.*

Injections of Strychnine in Cholera.—T. Ffrench-Mullen states (Indian Medical Gazette, July, 1892) that he has given hypodermatic injections of strychnine in some hundreds of cases of cholera, with very satisfactory results. He uses the method in every case in which collapse has set in or seems to be coming on. He gives 5 minims of liquor strychninæ in an equal quantity of water. As his patients were almost all seen in their own homes, and there were so many to be visited, it was, as a rule, only possible to give two injections in the day (morning and evening) to any one case. He has, however, given five injections in twenty-four hours, and two more during the following twelve hours in the case of a prisoner where the effects could be watched, and has no doubt the man owed his recovery to the remedy. When the urinary secretion has not been re-established within twelve hours or so of the cessation of the other symptoms, Ffrench-Mullen has given hypodermatic injections of pilocarpine with marked success in many cases, urine being passed within less than five minutes after the use of the syringe.

Antirabic Injections (Pasteur) in the Treatment of Epilepsy.—A. de Giovanni (Rif. Med., July 12, 1892), struck with the report from Paris that an epileptic who had been submitted to Pasteur's antirabic treatment had been at the same time cured of epilepsy, tried a similar treatment in the following case with very satisfactory results. In this case the patient had been subject to fits for five years, and lately had had as many as five or six daily. She had, besides, maniacal attacks, impairment of speech, limited intelligence, stupor, etc. The treatment adopted was the same as that for a case of hydrophobia. Good effects were noticeable on the second day of treatment, and the improvement went on steadily in all the symptoms; the convulsions ceased, the disposition and appearance of the patient improved, and it seemed likely that a permanent cure had been brought about.—*British Medical Journal.*

Convulsions Treated by Compression of the Carotid.—J. Gordon Kelly, M.D., Dublin, in the London Lancet, September 17, 1892, reports the following case: "Mrs. H., a married woman, aged 64, had been under my care for over two years, suffering from chronic rheumatism, renal troubles, etc. Summoned to her bedside after an absence of several months, I found the patient in a fit which had lasted one hour and a half. The pulse was full, respiration noisy and labored, and the muscles of her face and body were convulsed.

I tried compressing the carotid. Within a few moments from placing my thumb on the artery, the convulsions of the face and body began to cease, the respiration gradually became slower and deeper, and in about two minutes and a half she came out of the fit, looked around in a dazed way, and, when I asked her if she was better, nodded her head in reply. Since then she has had no return of the attack."

Quinine Hypodermatically. — Dr. S. R. Hodge, writing in the China Medical Missionary Journal, gives the following formula for Waller's solution of quinine for hypodermatic use:

℞ Quiniæ bisulph., Acid. tartaric., ää ʒ ij.
Glycerin, ʒ j.
Aqua, ad ʒ ss.

Place the quinine in the bottom of a large wide-mouthed test-tube; put the heavier tartaric acid on top of it; add the water; heat gently to boiling-point over a spirit-lamp till a clear solution results, stirring it with a glass rod from time to time; then as it cools add the glycerin. A clear one-ounce solution by measure results, of which one drachm contains 15 grains of quinine, and of course 20 minims contains 5 grains. This latter dose is equal to 20 grains of quinine given by the mouth.—*Medical Record.*

Formulas for Debauch and Red Nose.—We never suspected that our esteemed contemporary of the New York Medical Record inclined to be a *bon vivant*, but have noticed in his journal a penchant for publishing such formulas as the following:

"For the relief of redness of the nose not due to alcoholism, an exchange recommends the local use of a 5-per-cent. aqueous solution of boracic acid."

"In insomnia, anorexia, loss of will power, and mild hallucinations, following a prolonged debauch, pointing to threatening delirium tremens:

℞ Quininæ sulphatis, grs. xxv.
Acidi nitrohydrochlor. dil., ʒ vj.
Ext. cinchonæ, ʒ iij.
Aquæ destillatæ, q. s. ad ʒ x.

M. Sig.: A teaspoonful in water three times a day, before meals."

The Ice-Cradle.—Soltau Fenwick (Berliner Klin. Wochenschr., No. 31, 1892, p. 767) describes a device that has been employed at the London Fever Hospital for ten years in the treatment of cases of typhoid fever, and, more recently, of cases of pneumonia attended with hyperpyrexia. An ice-cradle is made by suspending over the patient, in bed, by means of iron frames, a number of zinc buckets, kept half-filled with ice and inclosed in a light covering. The patient is covered with a muslin sheet, and provision is made for the circulation of the air in the cradle. The temperature of the patient is to be taken at least every four hours, and if it falls to 100° the apparatus is to be removed. If a sense of chilliness appears, hot bottles are to be applied to the feet.—*Medical News.*

New Contributions to the Therapy of Male Impotence.—Dr. Victor v. Gyurkovechky has seen improvement in five cases of paralytic impotence, although only temporarily, from suspension. In three cases of sexual neurasthenia, complete and satisfactory cures resulted. Suspension of healthy males was always followed by increased sexual desire. He also believes that hypnotism will be found a powerful therapeutic agent in the treatment of onanism, spermatorrhœa, and various forms of impotence, and relates several cases to fortify his position. He also banished troublesome and constant erotic dreams in a single lady of 20 by this means, at the sixth seance.—*Wein. Med. Presse*, No. 47, 1891.

The Treatment of Scrofula with Creasote.—Julius Sommerbrodt, having used creasote for tuberculosis for the past five years, believes that in this drug we have a remedy for scrofula as well. It can, when pure, be administered in milk or wine to children, and also in capsules with cod-liver oil (not with balsam of tolu), and a daily dosage of more than 15 minims is not required. Although he believes this remedy is given in too large doses, 15 to 60 minims being a sufficient daily dose for an adult, yet the excessive doses have not been dangerous, no fatal cases having been reported.—*Berliner Klinische Wochenschrift.*

Hot Rectal Injections.—These have been effectively employed for the relief of painful affections of the abdominal and pelvic viscera, such as renal colic, ovarian neuralgia, pelvic peritonitis, and dysmenorrhœa. The water used must have a temperature of from 105° to 112°; a pint is at first carefully injected; after this (mixed with fæcal matter) has been expelled, another pint is

injected; a third injection is practiced, and the fluid is usually retained.—Forer, in *Correspondenzblatt fur Schweizer Aerzt* (*Medical News*).

The Use of Salicylate of Soda for Sprains.—M. Labbée, without claiming any priority, spoke briefly at a meeting of the Société de Thérapeutique of the markedly satisfactory result which he had obtained by the use of one drachm of this remedy in twenty-four hours for a tibio-tarsal sprain. The following morning there was no pain, and in four days there was complete cure. His results were equally good in several cases, whether or not the rheumatic or anthritic diathesis was present.—*La Semaine Médicale* (*American Journal of the Medical Sciences*).

Creasote by Enema.—In the treatment of pulmonary tuberculosis, Grasset (Nouv. Montpel. Méd., No. 25, p. 500) administers creasote by the bowel, morning and evening, preceded by a simple enema. An emulsion is made as follows:

℞ Tinct. opii, ℥jss.
Creasoti, ℥xv.
Olei olivæ, ʒ ijss.
Vitell. ovi., No. j.

M.

—*Philadelphia Medical News.*

Asepsis of the Respiratory Passages.—Delthil recently presented to the Académie de Médecine (Sem. Méd., September 7, 1892) a communication in which he recommended the following inhalation as an excellent means of making the respiratory passages aseptic:

℞ Essence of turpentine, 350 grammes.
Essence of lavender, 100 grammes.
Iodoform, 10 grammes.
Sulphuric ether, 20 grammes.

Hay Asthma.—Dr. Edward S. Blair has treated a girl of 10 years who for one-half of her life had been subject to attacks of this disease. Under the use of potassium iodide and *Grindelia robusta* there were slight catarrhal symptoms, but, on lying down, marked wheezing and dyspnœa. These symptoms were checked entirely by the fluid extract of *Euphorbia pilulifera* (dose not stated), and the relief of these symptoms was followed by a marked increase in flesh and strength.—*Therapeutic Gazette.*

Medical Progress.

Euphorbia Pilulifera.—Some time ago I received a bottle of *Euphorbia pilulifera* (Parke, Davis & Co.'s); habitat, Australia and West Indies; dose, one-half to one fluidrachm. It is a domestic remedy in Australia, and is there regarded as a specific for colds, coughs, bronchial troubles, in fact for all diseases of the respiratory tract; it is also esteemed for its prompt and sure relief to asthmatic patients. I have used the remedy in many cases of pneumonis, asthma, bronchitis, influenza, croup, pleurisy, emphysema and cough, etc., and I find it highly efficacious in such troubles. In fact, it has relieved all cases in which it has been used, acting like a charm in most of them. Space forbids mention of every case, but enough will be said to state my experience and to draw attention to the admirable effects of this splendid remedy in all diseases of the respiratory organs.

The dose of one-half to one drachm is too large for most persons. I use 10- to 15-drop doses for adults; children, 1 to 5 drops every one, two, or four hours. I have given a few doses every half-hour; then, when the patient was relieved in a measure, extended the period to suit the case. In one case, an old lady, it caused "swimming of the head," but, the remedy being withheld, this soon wore off. In one case of gastric trouble, with nausea, it produced irritation of the gastric mucous membrane.

It acts on the respiratory and cardiac centres in a short time, increasing respiration and pulsation of the heart for a brief period, then retarding both. I think it toxic in large doses, and noticed in some of the cases, where one drachm was administered, a weakness of the first sound of the heart, with dyspnœa, embarrassment of the heart and respiratory centres; would fear heart failure, arrest of the heart's action by diastolic prolongation. I think it stimulates the liver, and also the kidneys, slightly.

Mrs. A., aged 36; asthma; had to sit up all the time; great dyspnœa. She had been in this condition for twenty-four hours; difficulty in breathing was painful and very distressing. Gave her ten drops of euphorbia in half a teacup of warm tea, repeated in twenty minutes. Some relief was experienced. In twenty minutes I again repeated the dose. Dyspnœa yielded immediately. Ordered 10-drop doses every four hours, and to give it oftener if necessary. Slight spell of dyspnœa that night; relief permanent. This was a severe and distressing case.

Another case of spasmodic asthma, not so extreme, was relieved with 10-drop doses repeated every six hours as a precautionary measure; first dose relieved.

Mrs. R., 70 years of age; malarial fever, peritonitis; patient suffering from bronchitis and emphysema; dyspnœa troubled the patient night and day. At intervals a hacking cough also helped to prevent sleep and rest, and it looked like the old lady would soon cross the river. Ten drops of *Euphorbia pilulifera* were given every hour until three doses were administered, and, behold, the dyspnœa disappeared, the harassing cough was relieved, and she went into a quiet sleep, the first for forty-eight hours. Ordered ten drops when necessary—one dose at night, anyway.

Mrs. G., aged 33; influenza, hacking cough; could not rest night or day. Five drops every half-hour relieved her in a few hours. Ordered ten drops every four hours.

Mr. R.; fever, influenza, severe cough. Twenty drops relieved him in a short time.

I find it best to give euphorbia in any kind of warm tea; the effects are more prompt. In children it can be given in warm milk.

Mr. C., aged 22, was attacked with measles. When convalescing he relapsed with pneumonia, and then erysipelas of the neck and face; a harassing cough troubled him, rendering it impossible to rest. I administered euphorbia, 10-drop doses, and it relieved him. His sickness extended over a period of eight weeks, and the remedy was used through the entire spell. Some days not a dose would be taken; again three or four doses would be taken in twenty-four hours.

In all cases treated with euphorbia it deserves praise as one of the factors towards recovery. There is no doubt this remedy exercises a controlling influence over the pneumogastric nerve, producing sedation of those spasmodic symptoms so prominent in most cases of asthma, croup, etc.—E. Carmichael Rothrock, M.D., in *Medical Summary*, September, 1892.

Aristol in Gynæcology and Abdominal Surgery.—Dr. C. D. Palmer, in a communication to the Cincinnati Academy of Medicine, September 14, 1891, said:

"Aristol adheres very readily to the skin or surfaces of *wounds* and *burns*. While similar in its general specific action to iodoform, it has the valuable property of forming an absolutely unirritant covering over surfaces upon which it is placed, under which the processes of granulation and cicatrization proceed with extraordinary rapidity. Not absorbed, it has no toxic effect. It possesses stimulating, alterative, anæsthetic properties.

"It is not my place to speak of its therapeutic powers in dermatology, except to make mention that these diseases frequently affect the external organs of generation of females. Ulcerations of various kinds, varicose, epitheliomatous or carcinomatous, syphilitic, etc., are especially influenced favorably by it. I use aristol in pure form, applied by insufflation, except when placed in narrow canals, like the female urethra, or in the bladder or uterus. Within the rectum it can be utilized, as within the vagina, by insufflation or by suppositories. It becomes an admirable dry dressing for some cases of chronic vaginitis, vulgar pruritus, cervical endometritis, cervical erosures and fissures, mammary fissures, and syphilis primary and secondary. It has been my habit for years, in all cases of operations for trachelo-plasty, colporrhaphy and perineorrhaphy, as well as for vesico- and recto-vaginal fistulæ, to dust some iodoform powder or to apply a dry tampon of carbolized gauze after the operation; now I consider the aristol application as superior. I am well satisfied that aristol powder, applied over the sutured abdominal walls, in all cases of *ovariotomy*, and after all *abdominal sections*, is much better than any wet dressings, or any dry dressings with iodoform. Crayons of aristol may likewise be profitably utilized in certain cases of general *endometritis* and after currettings of the uterine cavity.

"Probably the dry dressings of aristol, with absorbent cotton or wool, are quite useful in some cases of chronic pelvic cellulitis and pelvic peritonitis, attended or not with pelvic abscesses. For the after-dressing of vaginal hysterectomy it is the remedy, as well as after mammary amputation. Aristol gauze can be made by impregnating plain gauze with an ethereal solution of aristol—one to two grammes per yard. Crayons for the urethra or uterus can be prepared by using at least one gramme mixed with sufficient quantity of gelatin or gum acacia."

In a discussion following the reading of Dr. Palmer's paper, Dr. Marcus said that, in a trial in a number of cases of varicose ulcers of varying degrees of severity, aristol had given him more cause for congratulation than any remedy yet used by him in that class of cases. Applied, as first suggesting itself, in ointment form with vaselin as a base, the result was *nil*. He then adopted the following plan: The ulcers were cleaned and all scales removed, and moisture dried with absorbent pads of cotton; the aristol was then dusted freely over the entire sur-

face, and over all was placed a thin layer of absorbent cotton, the entire dressing being then painted with elastic collodion. The result in most cases was gratifying, and confirmed for the speaker a half-formed opinion that greases and salves were not conducive to healing in *varicose ulcers*.

Dr. Palmer said he was pleased at the lively interest his paper had provoked. He would now refer to but a few points raised in the discussion: Aristol, in his experience, had proved itself to be one of the best remedies we possess for varicose ulcerations. It will not cure the varicosities of the veins, but it rapidly heals the varicose ulcerations resulting from the varicose veins. He had made the applications very much as suggested by Dr. Marcus, applying freely the dry powders of aristol twice daily, and adjusting over this application a pad of absorbent cotton, retained by a well-fitting bandage.—*Cincinnati Lancet-Clinic*, Oct. 3, 1891.

Bursal Affections.—According to Dr. R. H. Lucy, of Plymouth, hæmorrhages and sudden serous effusion into the cavities of bursæ have not received much notice nor the attention they deserve. Hæmorrhage into a bursa, he says (The Lancet), is traumatic in origin, and may follow (*a*) contusion or (*b*) severe and sudden movement of the joint over which the bursa is situated. The sacs most liable to this injury are, in order of frequency: (1) The two pre-patellar, subcutaneous and subfascial; (2) that over the olecranon process; (3) that over the tuber ischii; and (4) the subacromial bursa. The position of these over bony surfaces or "points" favors the production of this condition.

The subject of hæmorrhage is considered important, because the signs accompanying the presence of blood in bursal sacs are those which would lead us to confidently expect pus, and the author has seen many cases of enlarged bursæ treated by incision when the sole contents were blood in various states of change, or merely serum more or less blood-stained. Following a blow, fall, or severe strain, a swelling appears in the anatomical position of a bursa; this enlargement comes on rapidly—usually in a few minutes, and patients state that the lump has been "the same size ever since the fall," etc.—a most important point in the history. On palpation, fluctuation is readily obtained, with a certain amount of pain and tenderness, especially when the swelling has been caused by contusion; in a few days redness and œdema of the skin over and round the bursa appear, and the classical cardinal signs of inflammation ("tumor, dolor, rubor, calor") present themselves, but no pus but "cruor." The thermometer is here considered the best, though not an infallible, aid. In hæmorrhage pure and simple, although the signs of suppuration appear so unequivocal, the temperature is rarely above normal. Relying on signs alone, Dr. Lucy has seen many bursæ opened as abscesses, to find nothing but a blood clot or serum, with, in some cases, such as the pre-patellar bursæ, thin pus in the subcutaneous, but blood clot only in the thick-walled subfascial, cavity—analogous to the so-called "reflex abscesses" outside a joint, the seat of commencing disease. It is in these cases that ecchymosis is not present, it is maintained; when it is, no doubt exists as to what composes the tumor-contents. Crackling or rubbing is a sign especially marked on palpating a subacromial bursa filled with blood clot. The so-called "melon-seed bodies," so often demonstrable by palpation, at the bottom of such bursæ as the olecranon and pre-patellar, are, in the author's opinion, evidences of former hæmorrhage, being composed of condensed decolorized (more or less) fibrin, either free in the cavity, or moored by a longer or shorter pedicle to the interior; occasionally they are fixed and sessile.

As regards treatment, the limb should be immobilized on a splint, an ice-bag or evaporating lotion applied, and rest of the joint insured for several weeks, if the patient be anæmic or tubercular, in order to prevent suppuration. It is stated that the swelling slowly subsides, leaving "melon-seed bodies" behind, and these seem to be the starting-point of hæmorrhage following exertion. That hæmorrhage into bursæ is more common than is supposed, is proved by finding broken-down clot in the contents of abscesses caused by the bursting of a suppurating bursa into the subcutaneous tissues—*e. g.*, round the knee-joint.

Another interesting condition, of which Dr. Lucy has seen several examples in the subcutaneous pre-patellar sac, is the deposit of tubercle in bursal cavities, leading to infiltration of the overlying skin, suppuration, and finally an ulcer of the size and shape of the bursa. These have been accompanied by other tuberular affections, and were most obstinate to treatment.

Benzoate of Soda in Therapeutics.—Dr. Liégeois has written an exhaustive paper on the value of benzoate of soda in therapeutics. He considers this agent as of the

greatest importance in the affections below named, provided it is given in large doses. The pain, dysphagia, and inflammation of the pharynx in the common sore throat are favorably modified and cured in two or three days by the administration of 1 drachm in children, and 3 drachms in adults, of benzoate of soda daily. In diphtheria it is certainly of service either internally or in insufflation, but is not equal to applications of salicylic acid. In laryngitis and the ordinary acute bronchitis M. Liégeois considers it as a good expectorant when given at the onset; he prescribes it as follows:

℞ Benzoate of soda, ʒ j.
Tinct. of aconite, ♏xx.
Cherry laurel water, ʒ j.
Syrup of tolu, } āā ʒ ij.
Syrup of codeine, }
Water, ʒ ij.

To be taken in the twenty-four hours.

Associated with tannin, benzoate of soda gives good results in Bright's disease if persevered in:

℞ Benzoate of soda, } āā ʒ jss.
Tannin, }
Ext. of gentian, q. s.

Divide into 100 pills. Take 6 daily.

Given in small doses in uric acid gravel, it transforms the insoluble urates into soluble hippurates, and thus eliminates it from the urine. As a cholagogue, benzoate of soda occupies the first rank; he associated it with salicylate of soda and rhubarb:

℞ Benzoate of soda, }
Salicylate of soda, } āā ʒ j.
Rhubarb (powdered), }
Nux vomica (powdered), grs. x.

Divide into 20 powders. Take 2 daily.

—*Medical Press.*

PEROXIDE OF HYDROGEN IN GASTRIC DISTURBANCES.—A. N. Iakovleff (St. Petersburg Inaugural Dissertation, 1892, No. 109) has made nine experiments on eight subjects, of whom some were suffering from chronic gastritis, some from nervous dyspepsia, one from cancer of the stomach, and one from hyperacidity of the gastric juice, while the eighth was healthy. In all but two cases the patients were given 4 c. c. of a 3-per-cent. solution of H_2O_2 before breakfast, dinner, and supper. The patient with malignant disease and the one with hyperacidity took a 2-per-cent. solution, 4 c. c. from three to six times a day. The following is a summary of the results of these experiments: (1) Under the influence of H_2O_2 the general acidity of the gastric juice and the proportion of free HCl invariably increase. (2) The proportion of lactic acid always decreases, while in later stages of digestion the acid disappears altogether from the gastric contents. The phenomenon should be attributed to the well known antifermentative properties of H_2O_2. (3) The digestive power of the gastric juice is markedly intensified. (4) In the case of hyperacidity (as well as in another similar case in the author's private practice) the administration of the peroxide was followed by a distinct aggravation of all gastric symptoms, while in all others, including that of cancer, marked improvement was observed—the appetite improved, the epigastric pain ceased, eructations and vomitings decreased or entirely disappeared, the bowels became more regular, etc. The author further made experiments on frogs and dogs, his object being to elucidate the effects of H_2O_2 on the circulation. The results agree pretty closely with those published by Guttmann and Schwerin, the essential point being that H_2O_2 is decomposed by the blood, and hence can give rise to gaseous embolism with its consequences, such as dyspnœa, dilatation of the cardiac cavities, etc. From these facts Iakovleff concludes that injections of H_2O_2 into the circulation for therapeutical purposes, as suggested by some authors, are absolutely inadmissible.—*British Medical Journal*, Sept. 10, 1892.

OREXIN HYDROCHLORATE.—A. Rizzi (Gazz. Med. Lombarda, June 18, 1892) has taken up the study of this drug, which was first introduced to the notice of the profession by Penzoldt in 1891. Many conflicting statements have been made by different observers as to its action, and there has been a strong tendency to disbelieve in the claims originally made for it as a stomachic and aid to digestion. The new research tends once more to encourage the belief that orexin may be of real good in certain cases of failure of appetite. The author has employed the drug first on healthy subjects, and then on those with various gastric derangements. As regards the first class, he found, with Penzoldt, that the drug caused the appearance of a keen sense of hunger and produced increase both of the secretory energy and of the peristaltic movements of the stomach. In cases of atonic dyspepsia, complicated or not with chlorosis or anæmia, the author seems to have been equally successful with the original introducer, and to have obtained some striking results. He suggests that failure to obtain benefit from

the drug has probably in many cases been due either to the unsuitability of the case or to the fact that the specimen of the drug used has not been pure. Gastralgia or hyperæsthesia of the gastric mucous membrane should, however, always be taken as contra-indications to the employment of orexin, as in such conditions the drug may by an irritant action do more harm than good. It is recommended that the drug be administered in the form of powder, inclosed in wafers, and that its ingestion should be immediately followed by a draught of water or broth in order to prevent the drug from remaining confined to a small part of the stomach and exercising too strong an irritant action there.

Gonorrhœal Rheumatism.—Dr. Brodhurst advises, as treatment for gonorrhœal rheumatism, that the affected joints be wrapped in lint covered with mercurial ointment, that they should be bandaged as firmly as can be borne, and that the patient should be brought rapidly under the influence of mercury, preferably by inunction. With such treatment, pain and swelling quickly disappear and the joints resume their normal condition. At this stage passive motion should be instituted to ascertain if the motion of the affected joint is free, for lymph will have been deposited on the synovial membranes through which adhesions form. These bands soon become firm and resist any attempt that the patient can make to move the joint.

This treatment, according to the author, never fails if resorted to at the onset of the inflammatory stage. The knee, the hip, the elbow, and the shoulder are most frequently affected by this form of inflammation. Ankylosis may result—not in one joint only, but in every articulation of the body. When, after inflammation has ceased and passive motion has not been employed, adhesions remain and become firm, force is needed to restore mobility. This should always be used in the direction of flexion, since when thus employed no injury can accrue to any structure. Under some circumstances division of the flexor muscles is necessary.—*Therapeutic Gazette.*

Treatment of Diphtheria with Arsenite of Copper.—Success in the treatment of diarrhœa and dysentery with arsenite of copper, as first recommended by Dr. Aulde, of Philadelphia, suggested the idea of its use in diphtheria, on the ground that it was the alimentary system that was involved in both cases. The first of October, 1891, an epidemic of moderate severity made its appearance in this city, and lasted for several months. My cases, varying in age from one to ten years, were put upon the arsenite treatment, which was supplemented by small doses of calomel when it was needed on account of constipation. Inunction with sulphate of quinine suspended in glycerin was practiced in all cases, usually repeated every four hours. How much quinine was absorbed I do not know, but the plan keeps the skin in good condition. Where there was much cough or hoarseness, equal parts of glycerin and any good wine were given with the arsenite; or, if that was not agreeable, 1 per cent. of benzoic acid, combined with powdered sugar, was dropped on the tongue and repeated as often as thought necessary. No local applications were made; the surroundings were looked after; and when (as happened in some of the cases) little food could be taken, an effort was made to induce them to take water freely, either plain or in the form of lemonade. None of these cases were malignant, none died, and none suffered from unpleasant sequelæ. Such a short experience in the treatment of such a disease ought not to count for much, but I feel certain that the plan will prove (to say the least) as successful as any, while its application will be much more agreeable to all concerned.—*Indiana Medical Journal.*

Iodoform.—Following are a few of the numerous applications of iodoform. In the obstinate, chronic enlargement of tonsils, so common in our changeable climate, the writer has derived good results from iodoform in pill of ½ or 1 grain, three times a a day, persisted in till patient declares throat is well. In glandular enlargements, particularly of a strumous nature, an ointment —20 to 60 grains to ounce of lard, vaselin, or lanolin—will prove a prompt and effective sorbefacient.

It has been found useful when applied to enlarged prostate gland. A professional friend informs me that a prostatic enlargement with stricture, that had resisted all other treatment, yielded to the local application of the drug. Writer has seen a small ulcer of leg to which a 20-per-cent. ointment was applied, rapidly fill up from bottom with healthy granulation. Large burnt surfaces have healed and cicatrized without contraction under its benign influence.—R. B. McCall, M.D., in *American Therapist*, September, 1892.

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Original Articles.

SURGERY.*

BY HAL. C. WYMAN, M.D.†.

GENTLEMEN: In beginning the regular work in surgery, I am reminded at the very outset of the difficulties we have before us. I think that students who have already spent some time in the study of surgical art have learned that it is no boy's play to master all the different items that enter into the so-called science of surgery. I have oftentimes thought, in years long gone by, when a student, that it would be a very easy matter to get along with practice just as soon as I got my diploma. But when I reached that millennium and had gotten into practice, I found that my troubles had just begun.

Now, surgery is a peculiar art, based upon a science. A man must have a very liberal understanding and comprehension of things in order to practice the art with any degree of perfection. There are those who think that about all that is necessary is to possess a little deftness of touch, to be able to seize a knife and hold it while it is doing the work; they seem somehow to forget that any brain power is needed to guide it. But I think that as we progress this winter with our studies, as we begin to arrive at a general comprehension of what our purpose really is, we will form the conclusion that it is pretty nearly all brain work—this art of surgery—and that handicraft is only a small part of it. I do not wish, however, to have you understand me as meaning any belittlement of surgical handicraft. I know very well that there is a certain something that comes from practice—from the constant exercise of the sense of touch—from the constant training of the muscles—that gives the man who has had such practice, exercise, and training, a power not possessed by those who have not had them. And in teaching surgery it has always been my endeavor to hold up the technical part of the work, in order that I might stimulate those of you who expect to practice surgery to train the touch to the highest possible degree. And, in doing so, I am afraid I have sometimes forgotten that behind the educated touch there must be an educated brain.

A man who practices surgery must think. Before he can nerve his hand to do an operation, he must know pretty well the dangers of the operation he proposes. Furthermore, he must know pretty well what he undertakes, and what the outcome is going to be. It does not do to open an *abscess* when there is no abscess. If you say to your patient, "Here, I will make an incision and let out a quantity of pus," it is quite necessary that there should be some pus there to come out. And you cannot tell, before there is an opening, that pus is there, except by the exercise of a high order of brain power. You must take into your mind a large number of impressions, master them, make deductions from them, and then arrive at the conclusion that there is pus within the mass and that an incision will evacuate it. In this connection one recalls Stockton's "Lady and the Tiger" story which has been so happily dramatized. The *denouement* places the lover in the predicament of choosing from two covered cages, (one of which contains his love and the other a tiger), the one with his inamorata. This, you will see, must have been a very uncomfortable situation for the lover. Such situations come up ever day in the practice of surgery; you have little time to apply your brain, and speculate, and reason, and make deductions, and decide whether you will find pus—whether you will find the tumor so-and-so when you undertake an operation; but, at the same time, there is a certain element of doubt in the

* Introductory lecture at the Michigan College of Medicine and Surgery, Sept. 27, 1892.

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affairs of surgery that makes one who practices it very uncomfortable sometimes. And, in order to reduce that disagreeable impression to a minimum, it is necessary to train the understanding very carefully.

Now, surgery is an art which deals practically with things. We don't bother very much with the spiritual side of affairs in surgery. As I heard a great surgeon remark once, "very little time is wasted in the study of those matters." We deal only with tangible things—matters that can be taken hold of—material things. But running along with those material things is a stratum of purely idealistic matters, in one sense purely spiritual matters, that serve the purpose of a guide and enable the practitioner to arrive at some degree of precision with his work and to do uniformly and regularly that which to careless observers would appear to be simply chance. For these reasons we must not limit our work entirely to the manual part; we must endeavor by every means in our power to enlarge the field of mental operations which are called into play in surgical experience. As we look at surgery from another standpoint, finding ourselves dealing simply with so many material things, we reduce our art to a very simple matter.

In the practice of surgery we deal with wounds, and we very quickly learn to flippantly say that a wound is a mere solution of continuity. But a wound is something more than simply that. A wound is a break in the harmony of nature; it is a rupture, a separation, an opening through which life may in various ways escape.

When I first began to practice surgery, there was only one thing that was looked for in a wound, and that was hæmorrhage. If a wound did not bleed, all right—it did not amount to anything. But surgery to-day pays comparatively little attention to hæmorrhage. To control bleeding is simply a mechanical matter; all that is necessary is to compress the forceps on the bleeding vessel, and tie it up. But a wound means something more than hæmorrhage to-day; it means an avenue through which myriads of poisonous organisms may gain entrance to the system. A wound is simply a separation of the tissues through which these micro-organisms may gain access to the organs of the body. And a surgeon now-a-days, when he looks at a wound, looks at it for the purpose of keeping out those micro-organisms. Therefore, about the first thing a surgeon should learn is, what these micro-organisms are, where they are, and how they can be handled.

We find that the atmosphere is filled, every article we touch is covered, the water with which we would bathe the wound teems and swarms with micro-organisms which are capable, when introduced into a wound, of destroying life. Nature constantly makes a fight against these micro-organisms. The very skin of our bodies is nothing more than a bulwark against them. The bark upon the trees, the cuticle of the leaves as well as the cuticle of the baby's skin, are mere defenses on the part of living nature against the encroachments of micro-organisms. How very important it is, then, that a wound should be treated properly when the bulwark of nature is torn down! for that is really what happens when a wound occurs.

We speak of the different kinds of wounds; we say that wounds are incised, that they are punctured, etc. Those terms simply define certain characteristics sometimes possessed by wounds. Then, again, we say that wounds are subcutaneous, and that they are open. And right here I want to mark a distinction to indicate a difference. In your open wounds you have the organs of the body exposed to micro-organisms; while in the others—subcutaneous wounds—you have tissues rent asunder, the functions of parts destroyed, interfered with, or perverted, but the micro-organisms do not have an opportunity to do any harm—not usually.

Now, with this fact in our mind, we see that surgery becomes simply an art by which we defend, protect, or cleanse open wounds. Subcutaneous wounds will get along by themselves if the air cannot come in contact with them; if micro-organisms cannot get in, there will be no mischief; a few hours and everything will be repaired. But if the wound happens to be open and left entirely to accident, everything exposed, micro-organisms get in, pain follows, swelling makes its appearance, throbbing occurs, pus begins to discharge, chills and fever harass the patient, the appetite is lost, the tongue

becomes furred and the bowels constipated; the health of the patient is being undermined. That condition is called a wound fever. The term is used simply because the patient would not have had the fever if he had not had the wound.

Now, what I want to point out is this: that the mischief which comes from the wound is caused by something in the atmosphere, something extrinsic—something outside of the individual which gets inside of the wound. I do not mean that in the absolute sense, but as applied to wounds as they commonly occur. It is possible, of course, to strike a blow upon the chest which will completely disorganize the heart, and death will follow; but that is not so apt to occur. Blows sufficient to do that must do a great deal of violence. But a simple break in the skin is an avenue through which micro-organisms may pass into the system to produce the phenomena I have just described as wound fever.

These micro-organisms are talked about by everybody. I need not waste your time in giving specific information on that subject, but I will say just a little: that micro-organisms are a physical, tangible something; while we cannot see them with the naked eye, cannot feel them with the fingers, still we can tell their presence by the unmistakable effect and consequence. And I can safely say that all of the mischief that follows in consequence of open wounds is the result of these micro-organisms. I wish also to say in this connection that it is not only the presence of micro-organisms that makes the mischief, directly, by the numbers of the bodies, by the rapidity with which they develop, by the way in which they use up and pervert the fluids and juices of the body; but also that they develop a poison in the process of their growth, which causes chills, which interferes with the heat centres of the body, causing rise of temperature, and which not infrequently causes death.

Now, in view of this fact, I think you can see the importance of approaching a wound with great caution always. These micro-organisms are everywhere, on everything except fire practically and corrosive sublimate in state of solution. There are a great many chemical substances which are capable of destroying micro-organisms; but nearly all of those chemical substances are also capable of destroying human life, and the man who relies wholly on them in his fight with micro-organisms is very poorly equipped, so far as the future of his patient is concerned. He may make a very vigorous fight, but he may also lose his patient.

Fire is the greatest of all antiseptics; it is the one sterilizer before all others, and the one that the surgeon ought to be most particular to familiarize himself with. In fire you have the means by which you can quickly destroy micro-organisms. Every dressing that you contemplate bringing in contact with the wound can, in a very short time, be sterilized on a stove if there is a fire in it, or it can be sterilized over the top of a lamp. I have taken pieces of old sheets that had been used and were badly soiled, have held them over a kerosene lamp and thoroughly sterilized them, destroying every germ, and placed them subsequently in substances that were very sensitive to the growth of micro-organisms, and not one micro-organism made its appearance—satisfying me, beyond any doubt or question, of the ability of a small amount of heat to thoroughly sterilize matter. Now, with this means at our command, we ought never, in my judgment, to treat a wound without making an effort to keep out the mischief which comes in from without.

I think, if you will always have in mind one little rule when you see a man with a wound, which is this: "Now, here is a man hurt so-and-so; if anything happens to this man now, if this wound instead of healing begins to gap open, it will be because of something that *gets* into it, not because of anything that *is* in it;" if you have that in mind, I don't think it will take you very long to close that wound up so that nothing can get in—and the quicker the better.

There are a variety of materials that can be used for that purpose and that are distinguished in this way. Take a teaspoonful of beef tea; take a test-tube one-quarter full of a solution of gelatin, which readily coagulates. You can tip the test-tube up, and turn it in any way, and the solution will not move. Just as long as this solution is kept from the air it will remain transparent and

pure. It is made pure, however, by thoroughly boiling, after the beef tea is added. If you want to keep it pure, put a little plug of cotton in the top of the tube—and you will find that cotton for that purpose is the very best material for filtering out and destroying this something-or-other that, when it comes in contact with the gelatin, is capable of bringing about a change. By experimenting along in that way you will find that different articles possess different degrees of power in the matter of keeping out and holding back the micro-organisms that are capable of putrefying the gelatin and beef tea. Cotton, you will find, is the very best; therefore, when you take a simple open wound and cover it with cotton—a layer, we will say, 1 inch or 1½ inches in thickness—you practically shut that wound out from contact with any of those things in the air which are capable of setting up mischief in the wound. And cotton becomes, consequently, one of the very first things a surgeon has at hand when he prepares himself for the treatment of a wound.

The next thing to do when you contemplate a wound, is to think of the micro-organisms that are already in it, and whether you can remove them; whether or not you can so change the continuity of the adjacent parts of the wound that no other micro-organisms can get in. A surgeon might be very careful in the selection of his dressings, he might have his cotton and gauze all thoroughly sterilized, leaving his wound dressed perfectly, and no good come from it. No matter how much cotton is used, or how carefully it is applied, if he does not clean the wound out thoroughly, mischief will come. In the interstices between the most superficial layers of skin are spores and germs which are capable of forming pus; when a wound occurs, they are dislodged and driven into it; consequently there will generally be suppuration in the wound if it is not cleaned out.

We find also by observation that certain chemical substances are capable of destroying micro-organisms. These may be used in the infected wound, and the micro-organisms thus destroyed; but, as I remarked before, they are generally poisonous. Corrosive sublimate is probably the best one we possess, but it is well known what a deadly poison it is; while this article of antiseptic surgery was being developed, thousands of people were poisoned. I have seen a strong solution of corrosive sublimate used to wash out a wound. I have seen a solution containing five grains of corrosive sublimate poured into the abdominal cavity, although we know that one-eighth of a grain taken by mouth is all that a vigorous man can tolerate; it is not surprising that the patient died. But so long as the profession is familiar with the fact that chemical substances are capable of destroying micro-organisms in the parts adjacent to a wound, and in the wound itself, there is but very little danger of poisoning, because solutions of a poisonous strength are not commonly used.

Suppose a man has been run down by the cars; the micro-organisms are driven into the wound, and the thing to do is to thoroughly clean out that wound, to thoroughly bathe the adjacent parts with a solution of corrosive sublimate. But, in order to get this chemical germ-destroyer in contact with the germ, it is necessary to put the part through a little preparation. That preparation consists in the application of plenty of soap and water and plenty of good vigorous rubbing. Take such a wound as I have described; bathe the parts adjacent to it thoroughly with soap and water, rub it thoroughly, and then bathe it with a solution of corrosive sublimate of a strength of 1 to 2000, or 1 to 5000 if you are putting it into an open wound; and you have then done all for that wound that chemical antiseptics can do. But, having done that, you have still to resort to the protection of the wound from the air.

Now, a surgeon needs to know what to do with one who is wounded. He must not, in his zeal to properly treat a wound, lose sight of the man who goes with it. Bear that in mind. No matter how carefully he may study micro-organisms, how near-sighted he may become in his search for infinitesimal bodies, he must not forget that there is a human being in the immediate vicinity beside himself. Therefore there are certain things that should be done always when a wound is to be treated. If you are dealing with an open wound, one of the first things

is to exclude the air from the wound. Do not give the micro-organisms any further chance to get in than they have already enjoyed. The individual should be treated with reference to the nature of the wound he has. In the first place, he commonly requires to be handled; he must be moved if he has a broken limb and has fallen in the street. The doctor comes, makes an examination, and decides that he could make the patient more comfortable by taking him somewhere else. There are some things you can do in any case of fracture, in any case of subcutaneous wound, or open wound for that matter. If a man has a wound, we will say of the leg, and you want to carry him and put him into your ambulance, take the injured limb and bind it to the sound one. If he has a good limb, use it as a splint for the injured one.

If you are all alone and single-handed, with no intelligent help, you should first bring your patient into a sitting posture, then drop on one knee yourself, slip one arm under his legs and the other under his shoulders, grasp him firmly, and you can carry him quite a distance in this manner. If the injury is in the lower extremities, you can handle the patient without causing him much pain. If you find that the injury is in the upper extremities, in one arm, or in the forearm, simply lay the injured member across the chest, let it rest there, and bring the elbow snugly down to the side. If you can get hold of something to fasten it there, so much the better. If you have not a bandage that you can throw around the chest, take the man's coat and fasten the arm in position with that. You can take hold of your patient precisely as before, lift him up, and carry him anywhere.

If, however, you have help, if there are other people near—and it is very rarely that an accident occurs without a crowd being soon present—take any person who may be near by, and show him what to do to help move the patient. In an injury of either of the lower or upper extremities, an assistant can be made very materially to help carry the patient. You can put the assistant on the opposite side of the patient, and improvise a litter with your hands on which two men can carry a man a long distance with but little discomfort.

In putting a patient upon a stretcher, it is not necessary to lift him bodily. The very best thing to do after you have fastened the injured limb to the sound one is to simply place the patient on one side so that he will rest upon the trochanter and the shoulder; then slip the stretcher under him, sliding it well up under his body; turn him upon his back on the stretcher; and in this way you can handle him with very little lifting.

For the purpose of facilitating the handling of patients, a great variety of apparatus has been devised. There are stretchers made of different types. As good a stretcher as any, I think, is made by taking a heavy piece of canvas about the width of a sheet and just six feet in length, folding it double, and stitching its entire length. When it is firmly stitched, poles seven feet in length are passed through it, making its lateral borders. One of the advantages of this is that you can slip out the pole on one side, slide the doubled sheet well up under your patient until it appears on the other side, and then reinsert the pole. But another very good stretcher is made by stitching your canvas up in just the same way, then cutting off from the end a piece about six inches long, and so on until you have cut off about six pieces. Then take your patient, lay him on his side, put one of the pieces under his head, another under his shoulder, another under the lumbar region, another under the thigh, and so on. Then take your stretcher-poles and slip them in.

But sometimes you have not a stretcher at hand; the only thing you can get, perhaps, is a sheet from somebody's house, or somebody's coat, and you must get your patient onto it. In such a case, lay your stretcher down as near your patient as possible; then have you assistant take hold of the lower extremities, you taking the upper; and when you lift, both lift together. Slip your arm well up under the shoulder so that you get a good hold, and then gently raise your patient by mere physical force and put him quietly down upon the improvised stretcher.

I shall not say anything about the devices that are resorted to for removing a patient after these first efforts on the part of the surgeon have been made, but I think every surgeon ought to know just how to take

hold of the patient when he first sees him. In the early years of my practice I lost some of my very best opportunities while waiting to find out what I had better do, and the old doctor who knew just what was necessary to do at the right time came along and did it while I was thinking the matter up. And I have thought since that time that I would tell those who have the misfortune to listen to me, exactly what should be done at the start. Let me emphasize the fact that nothing will do the young doctor more good in practice and help him more in getting a start than to make the right impression at the time an accident occurs. Generally everybody around the patient is in a state of agitation; everybody is excited, people running this way and that way; pitchers are brought, and other things which are useless; and there is a lack, generally, on the scene of an accident, of anyone to direct matters. Now, the young doctor who knows how, can step in on such an occasion and make a very good impression—something that redounds very materially to his credit.

When you have gotten your patient under control so that you can handle him, so that you can move him, take him to some place where you can dress the wound, and do not let that place be a great way off. Many meritorious surgeons think it is best to do the primary dressing on the spot. During the last great war in Europe most of the dressing was done in the field hospitals; but the surgeon of to-day seeks to do that work, so far as possible, right on the spot where the injury happens. And if we had a great war to-morrow, and the United States had two million men in the field, and this college and every other college let their young men go to the front to dress the wounds of the soldiers, I think every student would be equipped with an outfit which would enable him to apply sterilized dressings to the wounds on the battle-field where they occurred, so as to save the danger of contamination which results from carrying the patient even a few miles.

COMPLICATIONS AND ACCIDENTS IN PELVIC SURGERY.

BY WILLIAM EASTERLY ASHTON, M.D.

In no field of surgery is it so important for the surgeon to be prepared to meet with accidents and complications as in that of the abdominal and pelvic cavities. In these regions the diagnosis is often, of a necessity, far from certain, while the complications of an operation cannot be determined prior to section. It may be that a vessel has been torn low down in the pelvis, or the intestines or the bladder have been injured; or, again, it may be that the diagnosis was wide of the mark and we find ourselves face to face with a diseased condition of one of the abdominal organs. It matters not what complications may arise if the surgeon has a thorough and practical knowledge of his work; but if he simply knows how to remove a mass from the pelvis, without, for instance, knowing how to repair an injury to the intestines or neighboring organs, he fails in his duty and will eventually add to an already long list of "unavoidable deaths." Suppose, in breaking up adhesions between a loop of the intestines and a pelvic tumor, that the bowel is torn and the patient dies; are we to call the death "unavoidable" if the surgeon had no practical knowledge of such injuries and improperly repaired the tear? No; such deaths are due to the ignorance of the surgeons who, with insufficient knowledge, have the temerity to enter the abdomial cavity, trusting to fate to see them safely out again.

I shall now discuss those complications and accidents which are common to all forms of abdominal and pelvic surgery.

Incision through the Belly Wall.—The accidents met with during this step of an operation are: Hæmorrhage; peeling off of the parietal pertioneum; wounding the bladder, the intestines, or an underlying growth.

(*a*) Hæmorrhage. Practically speaking, bleeding rarely occurs of sufficient amount to require the use of hæmostatic forceps. Under ordinary circumstances, therefore, the operator should not delay the operation by applying them, as all bleeding will have ceased by the time the abdominal cavity is opened. If, however, the hæmorrhage be free, the bleeding points should be caught with forceps. After the peritoneal cavity has been opened, all the forceps attached to the abdominal incision should be removed. Allowing them to remain simply impedes the freedom of manipulation within

the pelvic cavity, without being of the slightest use, as the crushing of the tissues completely stops the bleeding.

(*b*) Peeling Off of the Parietal Peritoneum. This accident may occur in the earlier work of an operator in a patient who has become emaciated by disease. The union between the peritoneum and the abdominal wall, under these circumstances, is very loose, and, after cutting through the subperitoneal fat, it may be readily stripped off under the impression that adhesions are being dealt with. Again, in those case where the peritoneum has become glued by inflammation to an abdominal growth, the same mistake may be made. Should the accident occur, nothing need be done, if the peeling has been slight, beyond taking care to include the peritoneum when suturing the abdominal incision. If, on the other hand, the separation of the peritoneum has been extensive, the flap should be cut away, as it may become gangrenous.

(*c*) Injury to the Bladder. This accident has occurred, but with proper precautions there is no danger of such a complication. Prior to section the operator should know that the urine has been voided. If any doubt exists upon this point, a catheter should be introduced into the bladder. The bladder in the adult, when empty or not displaced by a subperitoneal growth, is entirely a pelvic organ, while in the child prior to puberty it is partly within the abdominal cavity. Therefore, in the latter the incision in the belly wall should not go as low as in the former. It is always safe to allow a full inch between the lower end of the incision and the pubes. In large subperitoneal growths the bladder may be pushed up as high as the umbilicus, or even higher, and, unless great care be taken, an injury is certain to result. This accident I saw lately happen in the hands of one of the most skillful operators in Philadelphia, who made an incision directly into the bladder fully an inch and a half long. In all cases, when in doubt, introduce a sound into the bladder, which will at once determine the question.

(*d*) Wounding the Intestines or an Abdominal Growth. There is always danger of this accident occurring, unless great caution be exercised, in those cases where the parietal peritoneum has become adherent to any of the abdominal contents. In making the incision through the belly wall, much may be learned as to the probable presence or absence of peritoneal adhesions. An infected appearance of the connective tissue and subperitoneal fat indicates parietal adhesions or a thickened peritoneum. Again, free bleeding from the abdominal incision also points toward the same condition. In cases where the abdominal wall is greatly distended, the peritoneum is thinner than normal and closely applied to the growth beneath, and unless the surgeon is careful the intra-abdominal contents may be injured. Adherent gut along the line of incision is always to be expected in secondary sections. For this reason, the opening through the abdominal wall should be an inch to one side or the other of the position of the original incision. Whenever, under any circumstances, doubt exists as to the question of peritoneal adhesions, the utmost care should be exercised in opening the abdominal cavity. If the surfaces of the peritoneum through which the opening is to be made be rolled between the thumb and index finger, the existence of an adherent gut may be readily detected.

Vomiting and Contraction of the Abdominal Walls.—Either of these accidents occurring during an operation results in a serious loss of time and, by forcing the intestines outside of the abdomen, also increases the subsequent dangers to the patient. The cause of both of these complications is an improper administration of the anæsthetic. It is of the first importance that the anæsthetizer should be specially qualified for his work, for, unless he has this experience in giving an anæsthetic in abdominal cases, these accidents are bound to occur. The secret in the administration of an anæsthetic is to give sufficient to produce complete relaxation of the abdominal walls, while at the same time the patient does not become saturated with the drug. I firmly believe there are many deaths following section due to ether shock which are put down improperly to other causes. We should, therefore, eliminate this source of danger by operating as rapidly as possible and by intrusting the anæsthetic only to specially trained men.

Escape of the Intestines through the Abdominal Incision.—The protrusion of the intestines or mesentery through the abdominal opening may occur during an operation from vomiting, contraction of the abdominal muscles, or from the irrigation. To avoid this complication during the flushing of the abdominal cavity, the index and middle fingers of the left hand are passed into the incision, and the nozzle of the irrigator inserted between them. By this method there will be a free return flow of water, while the intestines are kept well in position. If, during an operation, the intestines escape from the abdomen, they should be returned at once, as recovery may be complicated by leaving them exposed. It is often impossible to return them *en masse*, as they escape again as fast as they are replaced. No difficulty will, however, be experienced if that part of the gut nearest the opening be found and, beginning at that point, it is pushed back with one hand while with the fingers of the other the succeeding segment is returned. By thus replacing segment after segment the restoration may be accomplished with rapidity.

Adhesions.—In all forms of abdominal and pelvic surgery, adhesions are dreaded by the surgeon. Practically speaking, the presence or absence of abnormal fixations of the abdominal contents determines the ease and safety with which a given operation can be accomplished. While it would be impossible to give in detail all of the various complications met with which are due to adhesions, yet there are some points of practical value which may be spoken of with advantage, although an actual knowledge can only be attained through experience.

For purposes of description we shall divide adhesions into those which are recent and those which are old. The former are soft and fine and are found most frequently in cases of peritonitis, either general or local. Again, they occur between the surface of a large tumor and the parietal peritoneum or the liver. In early operations for ectopic gestation or pyosalpinx the adhesions are found to be soft and easily broken up. In short, we expect to find them in all early operations within the abdominal cavity which have been preceded by inflammation. The management of recent adhesions is a very simple matter. Occurring between a tumor and the abdominal wall, they can be readily broken up with the fingers; recent adhesions to the liver may also be managed in a similar manner. In the removal of the sac of an ovarian cyst or in the delivery of a large solid growth, in fact in all cases where the adhesions are visible, they may be detached by simply rubbing them off with a sponge. In dealing with small pelvic growths the adhesions are, of course, invisible, and we must be guided entirely by the sense of touch in separating them.

Old adhesions are firm and more or less fibrous in nature, and require great care in their separation. They are found in old or neglected pelvic disease, and are the cause of some of the most difficult work in pelvic surgery. Again, we meet with them in large cystic tumors of the ovary which have been tapped, in fibroid tumors of the uterus which have been treated by the electric current, and also in solid pelvic tumors which have attained a large size. In a large sarcoma of the ovary which I removed, twenty or more ligatures were used in dealing with adhesions. In managing old organized adhesions, they must be either torn apart with the fingers or cut with the scissors or knife, and, if necessary, ligated to prevent hæmorrhage. If the omentum be fastened by adhesions and not readily detachable, a ligature should be applied, and, cutting it away, the adherent portion should be left upon the tumor. This is by far the safest plan in many cases, as the omentum is exceedingly vascular, and a serious hæmorrhage might result in the breaking up of the adhesion unless the ligature were used. Adhesions existing between a morbid growth and the intestines or bladder are sometimes so firm and broad that their removal is next to impossible and it is necessary to leave a portion of the tumor adherent to them, as their separation would result in serious injury. In most instances, however, these adhesions may be separated by tearing with the fingers or by ligating or cutting. A practical point of great value to remember in breaking up firm adhesions is, to keep as close as possible to the tumor. There is much less danger of wounding the hollow viscera if this plan be carried out.

Hæmorrhage.—No accident can occur in the pelvic or abdominal cavities which so sorely tries the skill, the coolness, and the character of the surgeon as that of hæmorrhage. There is here no time for deliberation. Action must be prompt or the patient will be in imminent danger of death.

Bleeding in the pelvis may occur from adhesions, from rupturing a vessel during the enucleation of a tumor, from tearing the broad ligament, and also from a pelvic mass itself.

Hæmorrhage resulting from adhesions is usually of but little moment, as it is generally slight and is readily controlled by the irrigation. If the adhesions have been extensive, a glass drainage tube should be used, not only to carry off the serous and other accumulations, but also to check the oozing. Free bleeding from adhesions may often be successfully controlled with pressure, by means of gauze or a sponge, which is removed after the operation has been completed. In cases where the oozing keeps up, however, a good plan is to catch the tissues, from which the hæmorrhage occurs, with a long pair of forceps, leaving it in position and hanging outside of the abdominal opening for twenty-four hours. This method is much better than packing with a narrow strip of gauze and leaving its free end outside of the abdomen, as the exudations rapidly become organized within its meshes, thus rendering its removal impossible until loosened by suppuration.

A hæmorrhage occurring from a pelvic mass or tumor, during its enucleation and delivery, need cause no concern, as the bleeding will cease as soon as the pedicle is ligated.

In digging out an adherent mass situated low down in the pelvis, one of the iliac arteries has been torn. This accident must be met by the immediate ligation of the torn vessel. To control bleeding occurring low down in the pelvis, the abdominal incision must be enlarged and the intestines pushed up out of the way; at the same time the cavity must be quickly sponged out so that the point from which the blood comes can be seen and caught up with forceps and ligated. Under these circumstances Trendelenberg's position will be of great service. It may be necessary in some instances to turn the intestines completely outside of the abdominal cavity in order to locate the hæmorrhage. If this be done, the intestines must be placed in hot aseptic towels and kept at the proper temperature by frequently pouring warm water upon them. If this precaution be neglected, the patient is in great danger of dying from shock.

One of the most frequent causes of hæmorrhage, in pelvic work, is from a rupture of the vascular arch formed by the anastomosis of the ovarian and uterine arteries. In fact, we should at once examine the broad ligaments in all cases where hæmorrhage occurs, before looking elsewhere. The vessels are torn either in breaking up adhesions or in making too great tension upon the pedicle of the appendages when applying the ligature, or, finally, by the ligature cutting into the broad ligament. The stump of the pedicle must be at once brought up into view and the upper border of the ligament examined. If the hæmorrhage is found at this point, the tissues must be caught with forceps and a ligature applied below it. Where it is impossible to bring the broad ligament into view, on account of its being bound down by adhesions, we must enlarge the abdominal incision and manage the case in the same manner as that already described in dealing with hæmorrhage occurring low down in the pelvis. This accident occurred with me some four weeks ago, during an abdominal section at the Philadelphia Polyclinic Hospital. The bleeding began during the irrigation, and in a moment or two became very profuse. As I was unable to bring the broad ligament up into view, the incision was enlarged, the intestines pushed out of the way, and the pelvic cavity rapidly sponged out. The hæmorrhage was found coming from the superior border of the broad ligament, which had been torn during the delivery of the appendages. Although the patient lost a considerable amount of blood, and the operation was necessarily prolonged, she made an uninterrupted recovery.

Hæmorrhage may occur from the stump of a pedicle if the ligature has been insecurely applied. This accident, however, will rarely occur if proper care care be taken with the

technique. After tying the pedicle, the free ends of the ligature should be cut off at once close to the knot. The pedicle should then be cut partly through, but before completing the separation the stump must be caught with hæmostatic forceps. This enables the operator to examine the stump after the pedicle has been cut through, without in any way interfering with the ligature. A hæmorrhage occurring from a stump is, of course, controlled by a second ligature. It is important to remember that a hæmorrhage from any portion of the broad ligament may always be controlled by passing a ligature through it at both its uterine and pelvic ends.

Injuries of the Intestines.—These accidents are liable to occur even in the hands of the most skillful operator. It is of first importance, therefore, that the surgeon should be prepared for any form of intestinal surgery that he may be called upon to deal with. Good judgment is also necessary in dealing with these injuries, as well as a knowledge of operative technique. All injuries of the intestines should be repaired at once, in order to prevent fecal extravasations occurring. Slight wounds require only a few Lembert sutures to close them. If the injury has been caused by a knife, the edges of the wound are clean-cut and even; if, however, they are due to tearing, the margins are uneven and ragged. In either case they should be closed by the Lembert suture or one of its modifications. There is no necessity for trimming away the edges of an uneven tear, as they are inverted into the lumen of the gut and do no harm. In all extensive injuries the question of resection followed by anastomosis at once arises, and the judgment of the operator must decide the point. Tears involving the mesentery are always serious, as they frequently require resection on account of the danger of gangrene occurring in the gut, due to the wound interfering with its nutrition. This fact should be always borne in mind, as death is certain to follow such an injury if gangrene occurs. Occasionally in breaking up broad adhesions from an intestine, its tissues have been stripped away down to the submucosa. Provided there be no leaking of the contents of the bowel, these cases require no suturing and may be left safely to nature. An interesting bowel injury occurred in the practice of Dr. Baldy, of Philadelphia. He tore the upper portion of the rectum completely across in the enucleation and delivery of the left appendages. The situation of the injury was so low in the pelvis, and the adhesions held the gut so firmly, that he found it impossible to suture the torn ends. He therefore placed them in apposition, inserted a glass drainage tube alongside of the bowel, and closed the abdominal incision. The patient passed flatus by the bowel at the end of the second day, which was followed by a movement on the fourth. Recovery was prompt and rapid, without a single bad symptom.

Wounds of the Bladder.—An injury to this organ may occur while making the incision through the abdominal wall, or in the breaking up of adhesions. Its rupture, and the escape of urine into the peritoneal cavity, are not so serious a complication as might at first be supposed. Under these circumstances the wound should be sutured at once, the abdominal cavity thoroughly irrigated, and a catheter, introduced through the urethra, left in the bladder for twenty-four hours.

Wounding the Ureters.—The ureters have been torn in the separation of adhesions, and they have also been included with the pedicle in a hysterectomy. Should an injury occur to a ureter, either switch it off into a new position in the bladder, or bring it out through the abdominal incision and stitch it, subsequently performing a nephrectomy or at once removing the kidney. The possibilities of success following the plan of uniting the cut ends are so slight that the method cannot be advised.

Wounding the Gall-Bladder.—The simplest and safest plan of treating injuries of this organ is to suture the tear. The objections which contra-indicate the intraperitoneal treatment of the gall-bladder following cholecystotomy do not hold under these circumstances, as there are no calculi to consider subsequently. In rare instances, however, it might be advisable to suture the gall-bladder to the abdominal incision, or even to perform a cholecystectomy.

Instruments or Sponges Left in the Abdominal Cavity.—If this accident occurs, it must be

set down to carelessness on the part of the operator, and of course an instrument or a sponge left in the abdominal cavity must be removed at once.

Philadelphia Hospital.

SURGICAL CLINIC.

BY JOHN B. HAMILTON, M.D., LL.D.*

Pott's Disease of the Toe.

GENTLEMEN: An extremely painful neuralgia of the pulp of the fingers and toes is always to be regarded with suspicion, because the pain may be due to occlusion of the arterial supply of the part. It may be the commencement of Pott's disease of the toe, which is gangrene of the toe. The first thing we observe is a painful, bluish spot, which appears usually more on the top or side of the toe than directly in the pulp, but the pulp soon becomes involved and the toe has the appearance of a frost-bitten toe. It loses its sensitiveness after a while, and the toe turns black; in other words, mortification has taken place, and the toe ceases to be amenable to the vital processes. It is a dead toe. If the obstruction of the artery be high up (and not infrequently it commences at the popliteal artery), we then have extension of the disease; in about a week the toe begins to swell, turning black, and the blackness extends up the toe and the centre of the foot; this forms a rather progressive stage, involving undoubtedly the entire foot. If, however, the disease is confined to a smaller artery, we then are able to wait for a line of demarkation before operating. But unfortunately the obstruction is generally much higher up than it appears in the beginning; and if the toe is not carefully treated at this time, it may allow the progress of more extensive disease than would seem at all likely or even possible from noticing this little bluish spot on the inside of the toe. We have the swollen condition of the toe and the extreme pain to guide us. Such a condition, as I said, is to be viewed with suspicion on account of our knowledge of what it may be; therefore we must put the patient in a position where he can be quiet; we must apply heat to the limb so as to restore the circulation as much as possible and favor the establishment of collateral circulation.

The only other disease with which we might confound it is a neuritis. Sometimes we have multiple neuritis, where many nerves are simultaneously affected, but such an affection is not within the scope of clinical surgery. But it is necessary to understand the diagnostic points of difference between simple neuritis and Pott's disease of the toe. In a neuritis we find other painful spots—we find pain throughout the course of the nerve, and it follows almost a direct line. For instance, if the pain is in this part of the toe (indicating), by tracing the nerves with the pole of a battery, which may be necessary sometimes, or with the æsthesiometer, we can determine whether the whole nerve is affected or not. In Pott's disease of the toe, on the contrary, we do not have any pain except that which occurs with equal steps with the progress of the mortification of the tissues. As the swelling, redness, and pain progress up the foot, we then have a localized pain following it; but no one can tell in the beginning exactly how far this disease may progress, because we cannot tell in the beginning what artery is first obstructed. So then we keep the limb elevated so as to favor return and collateral circulation; we keep it hot and moist, so that we may have the arteries relaxed. I would avoid at this stage, and in future stages, the application of any medicament such as iodine, that would be likely by discoloration of the skin to put a veil between it and your eye. We should keep a close observation of the progress of the disease. We should keep this patient in bed; have his limb elevated, wrapped in cotton; and have hot-water bags about the leg. It is well to remember in this connection that such treatment will be extremely soothing, and entirely applicable if it were simply a case of neuritis rather than one of arterial obstruction.

Rickets.

When you see a child, such as this, with a pouting navel, distended belly, projecting breast like a pigeon breast, and a waxy hue of countenance, you naturally suspect the

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peculiar disease known as rickets—which is a disease of nutrition, affecting mainly the bones. Rickets is a disease of early childhood. Please observe, as this patient walks about the amphitheatre, the characteristically slow gait. There is a little distortion at the sacro-iliac joint. The spine is at this time straight, but the chest is considerably deformed. The ordinary treatment for a condition of this sort is such as will improve nutrition generally. Medication, and not surgical measures, is required in such cases. The condition of fat which is present is very common in cases of rickets, and the tumid abdomen is simply another symptom, showing lack of muscular tone of the bowels. The projecting breast, and flattening of the chest on the sides, are characteristic of rickets. The syrup of iodide of iron with cod-liver oil is usually indicated in such cases. Contrary to what we might suppose from observation of dispensary cases alone, that the disease is due to the surroundings of the child, I will say that it also occurs in the children of rich parents and of those in comfortable circumstances.

Tuberculosis of the Bladder and Prostate—Perineal Section and Suprapubic Cystotomy—Through Drainage.

This patient has come here from a distance under the supposition that he has a stone in the bladder. I have not yet fully examined him, having found the prostate so swollen and painful that it cannot be done except under an anæsthetic. As the diagnosis is a most important matter, I will ask you to assist me in making it. The man's symptoms, as he explained them to me, are these: Stoppage of the urine in passing from the bladder; occasional hæmorrhage; always pain in the bladder; and frequent micturition; and he says he can feel something rolling about in the bladder. The latter symptom I do not place much stress on, as it may be imagination, it may be due to gas in the intestine, it may be due to various circumstances; but it may, of course, be due to a stone. These symptoms would indicate the presence of a stone in the bladder. We, however, have to remember, as explained to me, that he has twice been sounded—in one instance by a well known surgeon, who stated that no stone was present in the bladder; and we therefore have the presumption that there is no stone there.

The pathological conditions that would produce the same symptoms I have expressed, would be these: If we have inflammation of the prostate gland, a severe prostatitis, we would have symptoms nearly identical with the symptoms of stone in the bladder—stoppage of the urine occasionally, and a blennorrhagia, or discharge from the penis, almost the same as I recently described in speaking of tubercle of the testicle. We might have true tuberculosis taking the form of an ulcerative condition of the bladder just behind the prostate, the fundus, or bladder walls. Tuberculosis of the bladder, ulceration, tubercular or malignant disease of the prostate, are all conditions which might be mistaken for stone in the bladder. The usual test for stone in the bladder is the introduction of a sound. By this means we can obtain a pretty fair idea; with the finger in the rectum and the sound in the bladder, we can estimate the size of the prostate and tell whether it is enlarged or in a normal condition. When the stone is sacculated in the bladder, we may, with the finger in the rectum, tilt it out of the pocket or diverticulum in which it is placed. You must remember that sometimes, even with curved sound, the stone may escape being struck by the sounder, and you would not then hear the click of the instrument against the stone.

This patient is quite emaciated. Emaciation would be present in cases of tuberculosis of the bladder, and, in the second place, it would be present in advanced cases of stone.

The instrument which I hold in my hand is known as Thompson's sounder; it is hollow, and has a plug at the end for the attachment of a syringe by means of which the bladder may be distended with water. If you should undertake to sound for stone in the bladder by the use of an ordinary sound, and the bladder be emptied except of the stone, the latter might easily escape the point of the instrument on account of the folding in of the bladder walls; therefore this instrument is generally used by surgeons.

I have now introduced the instrument into the bladder, which passes into position without any particular difficulty, and I simply

push it forward until it strikes the fundus of the bladder. It encounters no stone at present. We will fill the bladder with warm water—distend it fully. By watching the abdomen over the pubes, we will discover when the bladder begins to be filled with water, and also by percussion we can determine it. We now insert the plug in the instrument; we have the bladder full of water. I now turn the beak of the instrument so as to press below the prostate, and shall, by carefully touching or sounding of the bladder, touch every portion of the bladder surface. Not only can you hear the click when the instrument strikes a stone, but it can be felt by the operator having the sound in his hand. He feels the impingement of the foreign body when it is present. I do not feel any impingement of a stone, and I have turned the beak of the instrument so as to make careful sounding directly behind the prostate. There is some roughness of the bladder at this point; and I suspect, from the enlarged prostate and other signs, that we have to deal with a case of tuberculosis of the bladder. In that event, perineal section and sometimes suprapubic cystotomy is the proper treatment, for by it we prevent spasm and the constant pain in the penis, and insure proper drainage of the bladder.

There is, however, one other thing to be considered in relation to this matter, and that is that sometimes the stone is encysted, sacculated. I remember that in one instance where I operated for stone in the bladder I had felt the stone distinctly with the sound, and heard the click, but after making a perineal section was unable to find it. It was not until I reintroduced the sound through the usual channel that I could again discover it. I found it attached to the anterior wall of the bladder, at the neck. It escaped observation at the time, and as soon as it was located it was immediately extracted. It was a soft stone.

In the case before us I shall make an exploratory perineal incision. This man's symptoms have existed for two years and a half; it therefore follows that he must be relieved in some way if we are able to do so. We could perform a suprapubic cystotomy, but the reason why I prefer perineal section at first in such cases is that the healing goes on better after operation, and we are able more directly to drain the bladder. It is handier to manage such patients after this operation than where you do a suprapubic cystotomy.

The operation of cutting for stone in the bladder, or making a perineal section, is performed on the same general lines. We may either make what is termed the Celsian operation, which consists in cutting directly on the gripe, or make a lateral or bilateral operation. You doubtless remember that Celsus, who lived in the second century, was the first to describe the "cutting on the gripe," which is cutting in the median line. Since his time it has been a favorite operation. Before that time lithotomy had degenerated so that it fell into the hands of charlatans, and old Hippocrates forbade its practice by his disciples.

I shall first introduce the staff. As a lubricant for the urethra, I think olive oil is superior to vaselin; it is much softer, and vaselin sometimes is left in the urethra and affords a nidus for the development of morbid bacteria. This long curved staff does not enter the prostatic portion of the urethra. I shall have to change the instrument for one with a shorter beak. We must remember, too, when cutting through the perineum in such cases, that sometimes these stones have been found in the perineum, having escaped from the bladder. I now incise the perineum in the middle line. We have now the instrument in the bladder, and by enlarging the opening a little I can explore the bladder pretty carefully with the finger. I shall now pass a finger into the rectum and make an exploration. I find a very much enlarged prostate. With my index finger of one hand in the bladder, while I pass the other into the rectum, I feel a very great thickening and enlargement of the prostate; and I doubt not this prostatic enlargement, which seems to fill nearly the entire pelvis, has caused the difficulty from which he is suffering. It is quite likely to be tuberculous in character, and the drainage which we have now insured will relieve his symptoms very materially. There is one other means that ought to be adopted in such a case; that is, to make a suprapubic cystotomy, in order that we may make "through drainage." At the same time,

we could make a prostatectomy by cutting out the prostate or some portion of it. I am compelled to say, however, that up to this time prostatectomy has not been sufficiently successful in its general results to warrant its frequent repetition. Sometimes, after perineal section we have spasm of the bladder from clot in a case like this; and where we have suspected tumor, which, of course, can only be reached by suprapubic cystotomy, it is very desirable to make that operation. I will therefore open the bladder from above so as to have double drainage. You will please remember that the operation of suprapubic cystotomy does not involve section of the peritoneum, the bladder being a little below the peritoneum, which we push directly upward if necessary, but in many instances we do not bring the peritoneum into view in this operation.

I had not intended a suprapubic cystotomy here, but I fear there may be stoppage of the perineal wound, and therefore shall perform it.

The patient is prepared precisely as for a laparotomy. The hair is shaved from the lower abdomen. The abdomen is carefully washed with soap and water, and finally cleansed with alcohol. Then an incision is made between the two recti muscles. Sometimes, if we need a little more space, we nick each rectus muscle or cut it loose from the pubes. Many times, however, this is unnecessary; in thin patients with somewhat atrophied muscles it is not necessary. If you have a patient with a thick, bellied rectus, it then becomes necessary to make a section to get space in order to reach the bladder. In my experience, the difficulty in sewing the bladder fast to the wound after we have reached the bladder is due to the fact that we have not had sufficient space in the opening. If we have sufficient space, there is very little difficulty. If we should not fasten the bladder, there would occur extravasation of urine. In these cases of tuberculosis of the bladder, where there is gradual diminution in the size of the organ, the bladder becoming more and more contracted, holding little more than a wineglassful of fluid, the urine will escape at the upper opening in preference to escaping through the tube. Exactly why it should be so, we do not know, but as a clinical fact it is so. In operating, we first feel for the pubes, then seek for the white line. We have now come directly on the rectus muscle, and we seek for the division of the sheath of the rectus. I have now separated the rectus muscle, as you will see here, and there is a layer of fat underneath. We will pinch this fat and raise it between two forceps, divide it, and push it carefully to one side. There next comes into view a layer of "pre-vesical" fat and a vein overlying the bladder. We have here, as I suppose, the bladder, and we will put a needle through it and pull it out. I pass a stout ligature through the viscus, and another under the two blood-vessels, and make a transverse incision of the structures between them. We see here a curious circumstance: although there is plenty of space in the wound for fluid to flow out, there is little flow, for there is scarcely any room for exploration of the bladder, its cavity having been greatly diminished. I now push a large rubber drainage tube through the perineal opening and bring it out through the upper opening.

The peritoneum has not been brought into view during any portion of this operation. We have established through drainage, which will stop the patient's pain in less than forty-eight hours; there will be no more spasm of the bladder, because the urine will flow naturally. We will be able to treat the tuberculosis of the bladder by injections of iodine, and it is barely possible that we shall somewhat reduce the size of the prostate gland.

These cases are generally fatal, whatever is done, and these openings are simply palliative and to enable us to reach the diseased parts.

This tube is now to be packed with a little gauze, not tightly, but enough to keep air from entering. The wound will be covered with iodoform gauze, and over that I generally lay a large pad of oakum. It is antiseptic; and its cheapness (it is cheaper than cotton) commends it for hospital purposes.

Fracture of the Clavicle in an Infant.

I next show you a case of fracture of the clavicle in an infant three weeks old. The

child is weazen-faced, with wrinkled skin, and very thin. Here is a strong projection just above the shoulder. On examination I found a sharp crepitus. There is evidently great pain. In a boy it is less objectionable to have a lumpy clavicle after union than in a girl. The situation of this fracture is one which makes it extremely difficult to hold it in place. I doubt whether *any* apparatus will hold it in place. I doubt if adhesive plaster can be used for this purpose. We have an inward displacement of nearly an inch of the sternal fragment, and at the outer end it is entirely thrown away from the acromion process of the scapula. If the child were not quite so feeble, I should advise cutting down on it and sewing it in place, but we will here have to depend on the efficacy of a soft muslin figure-of-eight bandage.

HYPODERMATIC MEDICATION.*

BY ANDREW BOYD, M.D.†

I have selected this subject mainly on account of its every-day practical utility. I don't flatter myself that I can present anything new or original to you, for I selected it on account of its lack of theory; but I think it may help us all to review the history of this great mode of administering medicine, its value in the treatment of diseases and their symptoms, and the proper manner to use it. It is quite unnecessary for me to make one argument in its favor. Long ago it became a staple article. It is here to stay, and its discovery was one of the greatest blessings to mankind; but, like many other good things, it has been abused, and is to thousands to-day, even in our own profession, a damnable curse. But I shall speak in this paper as to its blessings, as it was intended in the beginning, and not of its abuse. It stands to-day on the same high plane as vaccination, anæsthetics, bacteriology, and many other great boons to the sick and suffering.

In all honesty I do think that hypodermatic medication has given more satisfaction in relieving pain, staying disease, and prolonging life than any other one thing in the province of medicine and surgery. And it, too, like many other great discoveries, was almost an accident, a bastard child. In its very first use it was a true discovery; but as we know and use it to-day, it was a pure accident. It was first published to the world in 1855, in the Edinburgh Medical and Surgical Journal, in an article by Dr. Wood. In 1843, twelve years before he made it known, he found that a solution of morphine injected under the skin *in the vicinity of the painful part, gave instant and pleasant relief* more readily than by the mouth. He had no idea of its systemic action or effect. He attributed its curative and anodyne powers entirely to the local effects of the medicine injected. He says: "Much depends upon the affinity between the particular medicine administered and the tissue to which it is applied." And, with this view of the *modus operandi*, he directs that "the instrument (*i. e.*, cannula) is not to be put into the place where the patient complains of pain, but into the spot where you find you can awaken the same pain on pressure." Certainly he had no idea of its constitutional effects—that morphine injected acted primarily on the nervous centres—for he says: "It is wonderful how quickly it affects the system; if you introduce a large dose of morphia, you will see the eyes immediately injected, the patient narcotized, and in a few minutes he will be in a deep sleep."

Dr. Wood was an Edinburgh man and was the first to publish the discovery, but historical data show the discovery really belongs to America. In 1839, four years before Wood used it, Dr. Joel Taylor and Dr. Washington used the same medication in the same manner in the City of New York Dispensary. So to America the honor justly belongs.

To Charles Hunter, of London, belongs the discovery as it is used to-day. In 1859 he read a paper on "Experiments Relative to the Hypodermic Treatment of Disease." He demonstrated the fact that the injection at the painful spot, as contended for by Wood and his followers, was really unneces-

* An essay read before the Jackson County (Ala.) Medical Society, Tuesday, March 1, 1892.

† Censor and Secretary of the Jackson County Medical Society; Ex-First-Vice-President of the Tri-State Medical Association; Member of Alabama State Medical Association.

sary; that its action was not local, but general or constitutional; that equally good results followed where the injections were made at a distant point; that "it acted by absorption," acted quicker and stronger than by the endemic or stomachic method; that a small dose given this way had more effect than a large one. Hunter was a very illiterate fellow, and his papers are said to be gems of mutilated jargon and bad grammar; but the honor is his, gained through accident, the result of necessity. Hunter was a follower of Wood, and used it in the same manner as taught by Wood, until one day he was called in consultation with a Dr. Pittman, of St. George's Hospital, London, to see two patients suffering with facial neuralgia; and at the painful point, or the point where the same pain could be made by pressure, each had a large and painful abscess. Old Hunter said the syringe must be put in somewhere, and for experiment they introduced it at a distant point, with even better results than under the old manner. And from this illiterate fellow, by almost a pure accident, we received the benefit, and employ it to-day exactly as he used it then.

Now the two main things to be considered in the proper application of hypodermatic medication are: (1) The medicine to be used, and that in the proper solution; and (2) the instrument to be used for the injection. As to the first I need to say but little; we are not worried to-day by having to make our own solutions. Such great pharmacists as Wyeth, Parke, Davis & Co., Sharpe & Dohme, and others, have relieved us almost entirely of this worry, trouble, and vexation. They, with their great medical genius, have given us the compressed hypodermatic tablet to fit almost every symptom of disease, certainly every emergency. No worry now as to the accuracy of the dose, perfect solution, and perfect preservation of the drug. Improvements have been made in these until to-day they are as perfect in every particular as it is possible for them to be. We seldom now hear of such accidents or ill results of hypodermatic medication as a few years ago were so common. Only a few years ago abscess was the rule, now it is a rare exception. The number of agents now used hypodermatically, alone and in combination, is surprisingly large, including almost the entire catalogue of alkaloids in materia medica. Tablets are made so nice, so compact, so accurate, so free from fault, that a physician can now practice medicine satisfactorily and successfully with only a thermometer and a hypodermatic case, this containing the various tablets as devised by Parke, Davis & Co., Wyeth Bros., or Sharpe & Dohme. With one of these cases you can certainly meet every emergency, from relieving pain to combating the grave symptoms of tetanus, malarial fever, or the alarming accident of snake bite.

A few days ago I heard one of our most popular and successful practitioners say that he would not know how to practice medicine now without his hypodermatic case; and this is true with the majority of us. We dare not go to the country or start on our morning or evening calls without our syringe. It is hardly necessary for me to say anything more about the agents to be used. In this short paper, after treating the medication in a general way, I would not have time to do any of them justice. A valuable and interesting paper could be prepared on any one of them. Morphine, apomorphine, physostigmine, nitroglycerin, and quinine—any one of them would furnish ample material for a good paper. It is not my purpose at this time to particularize on any of them, but to treat the subject in a broad and crude manner.

Now, the one thing that is of most interest to us, of the most practical value in connection with hypodermatic medication, is the syringe, a good reliable syringe. With it, everything is easy and nice; without it, a miserable failure. Now it behooves us to know what constitutes a good one. What can be more annoying than, when called to see a patient suffering intensely with a cramp colic or the passage of renal or biliary calculi, or a woman bleeding to death with a post-partum hæmorrhage, and we decide on hypodermatic medication as the only thing to give speedy relief, on getting our syringe out we find it out of fix, plunger contracted and dry, leathers loose or lost, needle stopped up, or any of the other provoking accidents that are liable to befall the general make of syringes on the market? We work with it,

and doctor and patient both become dissatisfied, and often we have to abandon the chosen treatment. It is then that we feel that the secret of successful hypodermatic medication is certainly in using a good syringe. I have not experienced any of these annoying troubles in the past three years, for I have kept a syringe I could always rely upon, always ready at command.

I will try and tell you what I think constitutes the ideal syringe. First, it should have a roughened or milled handle to prevent it slipping in the fingers. The end of the barrel at the handle should have cross-bars or rings to grasp it stoutly. The barrel should always be of glass, enclosed in a metal frame; the barrel should never be solid, for then we are unable to inspect the solution before injecting, and this should always be done. A speck of dirt might not form an abscess, but it will form a knot when injected. You can make the inspection by first holding it against a dark and then against a light background. The smallest particle of matter can be detected in this manner. But I think the greatest improvement that has been made in the syringe is in the manner the needle is attached to the body, and the screw plunger. The base of the needle carries the screw, or the screw end comes off, leaving an opening large enough at the end for tablet. It has been my practice in the last three years to use this syringe, and I have not had an abscess. I fill my syringe about four-fifths full of water, drop the tablet in, screw the needle on, hold it over the lamp-chimney top to warm the solution, press all the air out, and the injection is ready for use. All tablets will dissolve this way—I mean those made in the last year or two; you get a bottle now and then made under the old process, and you have some trouble in making the solution, but even here you can crush it with the needle, warm it over the lamp well, and it will dissolve all right.

I know of but one syringe that is the ideal one, and this is made by Parke, Davis & Co., of Detroit, Mich. This not only has the best needle body attachment, but it has the patent screw-regulating plunger. So, if the plunger becomes loose or dry, you don't have to take the syringe to pieces to correct it; you simply screw it to the left and it is all right.

A Parke-Davis syringe, with kind treatment, will always be ready for use and will last for years. I have had this one now nearly four years; it has been in the shop once to replace the glass barrel that I had broken. The majority of instrument-makers are now making syringes with the open barrel for tablet solutions. I have a new one made by Codman & Shurtleff, of Boston, a splendid instrument now, and that will work finely for some time; but soon the plunger will wear away and shrink, and, if the leathers on the plunger are not kept moist with water or saturated with grease, it will not work. There is no way to tighten the plunger but to take it out, and this, of course, is a matter of great worry. The patent shoulder in the cap of the Parke-Davis instrument does away with this worry entirely. As to the needle, the smallest and thinnest size should always be used; with this, the pain accompanying the introduction amounts to almost *nil*.

Your syringes, like your friends, will thrive on good treatment. If they are used often, they need but little attention. I think it a good idea, after the operation, to boil some water in a spoon over the lamp chimney, draw the syringe full, and press it out. This cleans the syringe thoroughly, is perfectly antiseptic, and the hot water will dry the needle out and prevent the lumen becoming occluded by oxidation. The leathers must be kept tightened, moist, and pliable, and, if not used every day, a little carbolized vaselin put in them once every ten days will fill the bill.

The syringe you use for medication should never be used for anything else; observe this rule, and sepsis need not be feared, even in the absence of antiseptics, because an aseptic condition requires no such agent. Last summer, at the encampment of State troops, a captain of a Birmingham company, who was also a prominent physician of that place, came into my quarters one afternoon from the parade grounds, where he had been drilling his men. He told me he was suffering from a bad headache and wanted me to give him a hypodermatic injection of morphia. I was busy at the time, and, as my syringe and tablets were on the table, told him to prepare

it. He put a tablet in the palm of his dirty sweaty hand and made the solution. He came into the tent with his hand on his brass sword-hilt. I asked him if he wasn't afraid of abscess. He said no, and told me to inject it. I took the syringe and could see plainly the particles of dirt, but injected it as asked, certainly expecting it to make an abscess. I went to see him a few days afterwards, asked him about it, and he had even forgotten it. He had not thought about it since that night. There was not so much as a knot at the point. Here, where everything favored abscess, was it the antiseptic used in the tablet that prevented it? There is no doubt that particles of foreign matter were injected.

Many physicians use only water that has been sterilized by boiling. This, of course, is very safe, but I think quite unnecessary. Good drinking-water, if obtained from a flowing supply, is sufficiently aseptic; still it may contain some of the most potent cause of abscess—dirt. Several Chattanooga physicians have told me that it was almost impossible for them to use their drinking-water for this purpose, on account of the dirt. They have to boil it, filter it, or use it distilled. Dirt does not always produce abscess, but it will almost certainly leave a hard knot, where injected, that will remain a long time and cause worry.

If you have any reason to fear the water, just boil it. This is easily and very quickly done anywhere, and at any place you can get a spoon and a lamp with a chimney. If you have never tried this, you have no idea how quickly you can boil water in this way. In this manner it is entirely free from infection and perfectly safe for use. I have often with this water used the common sulphate morphine out of my pocket case, and have never had an abscess or a knot to follow.

Now, I believe I have considered in this paper everything of importance concerning the subject up to the operation of injecting. This consists of two acts: (1) Piercing the skin, and (2) emptying the syringe.

The first should be done with a slight swinging motion of the arm, causing the needle to enter with one quick and plunging effect. The needle should never be pushed in with repeated efforts. Before making the injection, press all the air out of the syringe, or until beads of the solution appear. Then inspect carefully for superficial veins. The site should be free from vessels and the skin loose and extensible. This will give plenty of room under the skin for the solution, and give but little pain. Now pinch up a fold of the skin, introduce the needle until the point is felt to be free, and move it around a little to be sure you are not in contact with any vessels. The injection is now made slowly and gradually, the needle is then withdrawn quickly, and the finger is placed over the puncture. Now, it is very important to avoid veins. There are two ways in which they are entered: (1) The needle may be put directly into the vein and the whole load be put directly into the blood current; or (2) the vein may be transfixed, and the solution, after the needle is withdrawn, sucked into it. In the first case the effect is almost instantaneous and very depressing in character, if morphine is used. In the second case the action follows quickly and strongly, but not so powerfully. I never had the first of these accidents to befall a patient, but the second I have witnessed three times. In a few seconds the patient complained of a very severe burning in the cheek, then the ear, and this intense heat and tingling would cover the entire body, and the patient felt as if he were burning up. The skin became very red and the superficial temperature was greatly increased. Circulation rose very high, in one case as high as 160°; respiration very rapid. For a while myself and patient thought he would die, but it soon passed off, leaving him quite exhausted and narcotized. If air be thrown in with the solution, the danger is greatly increased, and death has no doubt often resulted. As we use morphine more than all other agents combined, and therefore with it are more liable to the above accident or misfortune, the treatment will not be amiss. The immediate danger is the failure of respiration; and here let me say, always use atropia combined with morphine. While they act most agreeably and effectually in the relief of pain and producing sleep, they antagonize each other at the point of danger. If there is anything in materia medica that will stimulate respiration, atropia will. So combine them always;

you have nothing to lose—no risk, and all to gain. Then, again, it certainly stands to reason that in combination the morphine habit is not nearly so easily contracted.

But as to the treatment when the solution of air is injected into a vein. The only fear is failure of respiration, and you must devote your whole attention to the respiratory tract; keep the bellows a-blowing, and you will pull to a safe landing. Place the patient on his back, remove all constrictions from neck and chest, pull the tongue forward, and stimulate the nose with ammonia or strong cologne; the narcotism and heart will take care of themselves if breathing continues. Can use the faradic current, and give atropia to the extent of its full physiological effect.

SALOL IN SOLUTION.

F. H. Freericks, Ph.G., of Cincinnati, has prepared an elixir of salol, which is a solution, by mechanical means only, of 5 grains of salol in each dessertspoonful, making a palatable liquid, one advantage of which is that it renders the administration of salol very easy, especially to children and those who cannot take powders or pills.

When the elixir is administered, the saliva or the water that it may be mixed with produces a permanent emulsion, which insures a much speedier therapeutic effect on account of its fine state of division, which cannot be obtained by triturating the powder.

Salol is frequently prescribed in combination with phenacetin and also with acetanilid, both considered insoluble; both are soluble in the elixir. The result is that salol and phenacetin or antifebrin, or all three of these valuable remedies, can be obtained in solution together.

The solubility of phenacetin is 2 grains to the fluidrachm, and of acetanilid 2½ grains to the fluidrachm, indicating that each dessertspoonful of the elixir or 5 grains of salol may be combined with 4 grains of phenacetin or 5 grains of antifebrin by simply adding the powder to the elixir of salol and agitating for a short time, when a permanent solution will be obtained.

The solubility of 2 ounces of the elixir would therefore be 32 grains of phenacetin and 40 grains of antifebrin, rendering the administration of the largest doses very easy.

Correspondence.

WAYNE COUNTY MEDICAL SOCIETY.

The annual meeting of this Society was held Thursday evening, Oct. 6th, at its rooms in the University building.

The following officers were elected for the coming year: President, Dr. O. S. Armstrong; Vice-President, Dr. James Newell; Secretary, Dr. E. B. Smith; Treasurer, Dr. C. Henri Leonard; Board of Directors, Drs. Samuel Bell, Kenneth Gunsolus, George Dakin, J. F. McPherson, and John L. Irwin.

From the various reports made, the Society was shown to be in good condition, financially and otherwise, and has a large membership. Many papers were listened to in the course of the year.

A banquet was tendered the Society on October 13th, by Dr. D. L. Dakin, the retiring President, at the Griswold House, to which all members were invited. Speeches were made by D. Geo. W. Stoner, on "Abdominal Surgery;" by Col. Sellers, on "The Doctor in the Witness Box;" by Dr. Samuel Bell, on "Public Health;" by Dr. J. J. Mulheron, on "Germs;" by Rev. Paul Zeigler, on "Doctors and Preachers;" by Dr. O. S Armstrong, on "Courtesy Among Doctors. Short voluntary speeches were also delivered by Dr. G. V. Vorhees, of Coldwater, Mich., and other gentlemen who were present.

DR. J. NEWELL.

TRI-STATE MEDICAL SOCIETY.

The medical profession are invited to attend the fourth annual meeting of the Tri-State Medical Society of Georgia, Alabama and Tennessee, to be held in the Unitarian Church, 514 Houston street, between Oak street and McCallie avenue, Chattanooga, Tennessee, Tuesday, Wednesday, and Thursday, October 25th, 26th, and 27th.

All will be welcome at the meetings of the Society. The membership is limited to graduates of regular medical colleges residing in the United States.

A programme comprising 35 papers has been prepared, and the session promises to be an instructive and enjoyable one.

DR. FRANK TRISTER SMITH,
Secretary.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

B. W. PALMER, A. M., M. D., Editor.

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DETROIT, MICH., OCT. 25, 1892.

Editorial.

THE DETROIT GYNÆCOLOGICAL SOCIETY.

This virile, robust, and eminently progressive association held its eighth annual meeting on the evening of October 19th, at the club rooms of Swan's Restaurant, and, after the necessary business seance was over were entertained by the retiring and hospitable President, Dr. Charles G. Jennings, with a dinner which stimulated the currents of wit, humor, and repartee, making it difficult for guests to decide as to whether the mental or material feast contributed most to the evening's enjoyment.

The officers elected for the ensuing year were: President, Dr. J. H. Carstens; Vice-President, Dr. C. H. Leonard; Secretary and Treasurer, Dr. W. J. Cree. The Society has a membership of thirty-six, and does not fear extermination by the general practitioner.

The menu, in connection with cosmopolitan sentiments from modern and ancient poets, was earnestly and faithfully discussed. Having digested it, we can with propriety in our editorial capacity quote it, with due credit to the author, and may preface it by some comments by the late Lord Lytton, who remarked on a similar occasion:

"O hour of all hours, the most blessed upon earth,
Blessed hour of our dinners!
The land of his birth;
The face of his first love; the bills that he owes;
The twaddle of friends and the venom of foes;
The sermon he heard when to church he last went;
The money he borrowed, the money he spent;—
All of these things a man, I believe, may forget,
And not be the worse for forgetting; but yet
Never, never, Oh never! earth's luckiest sinner
Hath unpunished forgotten the hour of his dinner!"

The toasts were well calculated to inspire the speakers; and the general practitioner and gynæcologist, with their feet under the same mahogany, could listen with abandon and good humor while the orators amicably defined the virtues and vices of the gynæcological specialist and of the general practitioner. The latter, it has been determined, in order to keep in the swim, must become a specialist in all branches.

The toasts and speakers were:

"I would be loth to cast away my speech; for besides that it is excellently well penn'd, I have taken great pains to con it."
—*Shakespeare.*

1. The Literature of Gynæcology..Dr. C. N. Smith

"And so I penned
It down, until at last it came to be,
For length and breadth, the bigness which you see."
—*Bunyan.*

2. The General Practitioner and the Gynæcologist.....Dr. Charles Douglas

"The best specialists have always been made of the best general practitioners, and a good general practitioner has always been able to detect a danger which he may have felt necessary to ask a more experienced hand to avert."
—*Loosa.*

3. The Gynæcologist and the General Practitioner..... Dr. H. W. Longyear

"The times have not yet been ripe for the complete adjustment of the relations of specialism to general medicine, but they are fast becoming so, and we may safely leave that part of our former discords to the healing influences of passing years. They are rapidly smoothing out all the inequalities in those relations."
—*Loosa.*

4. The Ethics of Gynæcology .....
Mr. Thomas S. Jerome

"My tendency is to philosophise."—*Byron.*

5. The Esthetics of Gynæcology..Dr. F. W. Mann

"The beautiful rests on the foundation of the necessary."
—*Emerson.*

"This is a rather ambitious discussion of the sublime and the ludicrous."
—*Sully.*

6. The Victims of Gynæcology..Dr. J. E. Emerson

Still sad she seemed
And still her cheek some trace of terror wore."
—*Orcal.*

* * *

But to return to our menu:

Blue Points.

Consommé *à la* Royal.

Celery. Radishes. Olives.

Boiled Salmon Trout, Joinville.

Chicken Cutlets, with Truffles.

Green Peas.

Maraschino Punch.

Roast Snipe on Toast.

Julienne Potatoes.

String Beans.

Asparagus Salad.

Ice Cream and Cakes.

Cheese and Crackers

Coffee.

With the viands were served the wines, each with its apologetic antidote from the poets.

"Let us have wine and women, mirth and laughter:
Sermons and soda-water the day after."
—*Byron.*

Manhattan.

"It cheers the sad, revives the old, inspires
The young, makes weariness forget his toil
And fear her danger; opens a new world
When this, the present, palls."
—*Byron.*

Amontillado.

"Why should every creature drink but I?
Why, man of morals, tell me why?"
—*Anacreon.*

Sauterne.

"Come, come; good wine is a good familiar
Creature, if it be well used:"

St. Julian Medoc.

"And when, alas, our brains are gone
What nobler substitute than wine?"
—*Byron.*

Cigarettes.

"A weed you call it, but you'll own
No rose was e'er more fully blown."

Dry Monopole.

Love loves not the intemperate, although
Cupid and Champagne may exchange a glance.
—*French Proverb.*

Cigars.

"Critics avaunt!—Tobacco is my theme."
—*Delamotte.*

The toastmaster also brought to their feet Drs. Leartus Connor, Geo. W. Stoner, Ben Brodie, W. P. Manton, Eugene Smith, and others, who acquitted themselves creditably.

The more the merrier of occasions like this when the acerbities of medical practice are mellowed by the touch of nature that makes all doctors kin.

WHY DO SO MANY SELECT MEDICICINE AS A PROFESSION?

This is a question which interests those in practice as well as those who aspire to become full-fledged practitioners. That there is an overproduction of doctors, cannot be disputed. That quality rather than quantity is the desideratum, will be conceded.

It is gratifying to learn that educational progress is doing much to make the requirements for matriculation and graduation more exacting.

Over one-third of the established medical institutions of the country now exact four or more years of professional study and three or more terms of lectures as conditions of graduation; 45 per cent. more require three or more years of professional study and three regular terms of lectures. That is to say, nearly 83 per cent. have complied, substantially, with the resolution of the Illinois State Board of Health of July, 1887.

While these facts are gratifying, it is surprising, in view of the fact that the doctor's lot is not a happy one and financially he is not as successful in accumulating a competence as those engaged in less trying pursuits, that the proportion of those aspiring to become physicians is constantly increasing.

One explanation of this is offered by the British Medical Journal, which is of the opinion that "it is the honor of being called Doctor and being respected that entices many into the medical fold." There is a legend in an ancient Buddhist manuscript of the early days of the physician of the Gótama Buddha, whose name was Jíwaka, which puts the case for the aspirant for medical honors very aptly. It having become necessary for youthful Jíwaka to select a profession, "he considered the character of the eighteen sciences and the sixty-four arts, and determined that he would study the art of medicine that he might be called doctor, and be respected, and attain to eminence." This, although coming from the flowery East, is a good deal more practical and much less poetical than some of the reasons urged for studying medicine in announcements of the too numerous medical colleges.

That the profession of medicine is a very honorable one, is abundantly proved from its history in the past and the growing esteem in which it is held at the present day. The oldest medical documents are the various medical papyri of ancient Egypt. In that country the position of the members of the medical profession was very high. Students of medicine were educated with the priests and astronomers in the great temple schools of Heliopolis, Memphis, and Thebes. In the famous medical papyrus translated by Chabas there is a chapter of advice to such students, in which they were urged to diligence, cautioned "not to hang their affections on pleasures lest their books should fall out of their hands," and they were reminded that "whoso is dexterous in his craft achieves power and fame."

In another papyrus of the same class the teacher says: "It has been reported to me

that thou neglectest thy studies and seekest only thy pleasure, wandering from tavern to tavern. But what profiteth the odor of beer? Avoid it: for it drives people away from thee, impoverishes thy wit, and likens thee to a broken oar upon the deck of a ship." If the student desires to share the honor and dignity of a medical life, let him lay to heart that those honors and dignities have come down to our day through a long line of noble men who were the heroes, and very often the martyrs, of medicine. With a great price have these honors been purchased. Let him also do his part to preserve the treasure entrusted to his hands.

Professor Max Müller recently said that his advice had ever been to his countrymen abroad to do their utmost to sustain the honor of the Fatherland as though it depended on their individual efforts.

Medicine has its hagiology, its calendar of martyrs and confessors, whose labors have made it possible for the student to peacefully and easily pursue his studies to-day. Readers of Georg Ebers's delightful Egyptian romance, *Uarda*, will remember how the Egyptian doctor Nebsecht imperilled not alone his life, but (in his own estimation) his eternal salvation, to obtain possession of a single human heart for anatomical purposes.

Students of medical history will reflect that the great writers in medicine from Hindu, Egyptian, Greek, and Roman times amassed the information and won the honors which we use and wear to-day in face of obstacles and dangers of which we can have little conception. If, therefore, it is now honorable to be a doctor, the least the student can do is to uphold the dignity which he desires to share, and to take care that medicine loses nothing by his connection with it. Let him read and ponder well the oath which the Greek student of medicine took when he was received into the Society of the Asclepiadæ; let him peruse "the Law" and the "Oath" of Hippocrates. In these ancient documents he will see what our profession requires of him beyond the mere learning which it will help him to obtain. He shall share its glories; it will rest with him and his fellows that there are any glories to share in the generations to come.

If the great dignity of the healing art largely consists in its efforts to relieve human suffering, it must not be forgotten that it also shines in less resplendent glory by the services which so many of its professors and disciples have rendered to the accessory sciences. In natural history, chemistry, botany, materia medica, pharmacology, hygiene, and other branches of human knowledge, physicians have always been amongst the foremost and most distinguished discoverers and ardent workers. Pythagoras, Aristotle, Democritus, amongst the ancients, Boyle, Helmholtz, Donders, Hooker, Owen, Huxley, Flower, Birdwood, Hunter, Hendley, amongst the moderns, are a few of the many sons of medicine who in other than their own proper spheres have served their generation by great services to the sister arts and sciences. From the temple of medicine many doors lead to paths of distinction in these accessory studies.

Jíwaka's ambitions may thus be satisfied still, but his industry must be imitated by those who desire his rewards. It is recorded that his preceptor at the close of his pupilage bade him go out of the city gate and examine the ground around for the space of sixteen miles and make a collection of all the roots, flowers, and fruits which were useless in medicine. The pupil did so, but on his return told his teacher that he had met with no substance that was useless in medicine; there was no such thing on earth. The moral is that to the man of research Nature is ever ready to communicate more and more of her secrets. The man who complains of his opportunities in the study of medicine would find the Nile itself insufficient for a bath.

In thus impressing on the student the wisdom of trying to live up to his opportunities, we have no desire either to limit his reasonable pleasures and relaxations, or to make him a mere book-worm or a faddist; his first lessons in physiology and his common sense will teach him how necessary it is to keep the body in vigorous health if the mind is to be equal to the demands made upon it. To this end he should live in a healthy locality, with surroundings suitable to his character. The medical student happily is rapidly redeeming his character. Probably no class of students work so heartily and thoroughly.

The rowdy student is, we believe, all but extinct. We wish we could believe that the "hanger on" was equally a curiosity.

THE MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

This representative southern and western Association held its meeting at Cincinnati Oct. 12th, 13th and 14th. The attendance was estimated at 300. Indianapolis was chosen for the next year's meeting. The officers elected were: President, R. S. Sutton, Pittsburgh, Pa.; Secretary, T. V. Fitzpatric, Cincinnati; Chairman Committee of Arrangements, F. C. Woodburn, Indianapolis.

The social features of the meeting were a reception of the visitors by the profession of Cincinnati at the Art Museum, and a reception and collation at the Grand Hotel.

The address on medicine was delivered by Hobart Amory Hare, M.D. An address was delivered by the retiring President, Charles A. L. Reed, M.D., and upwards of seventy papers were read before the various sections.

ACTION OF ALKALOIDAL POISONS ON LEUCOCYTES.

Dr. E. Maurel, of Toulouse, has performed an important series of experimental researches on the action of poisons on leucocytes. The results are published in the Bulletin de Thér.

"In poisoning by sulphate of strychnine, the death of the leucocytes and that of the animal are simultaneous." Five centigrammes of strychnine will kill immediately all the leucocytes in 100 grammes of human blood, representing one kilogramme of the body weight.

The same concordance exists between a fatal dose of atropine and the quantity necessary to destroy the white corpuscles. Five centigrammes of the sulphate instantly kills the leucocytes contained in 100 grammes of human blood.

Similar investigations relative to pilocarpine show that it takes 10 centigrammes of that substance to instantly kill all the leucocytes in 100 grammes of human blood; 5 centigrammes will kill them in a few hours.

In another series of experiments Dr. Maurel investigated the action of cocaine on the white globules, and he concludes that death by cocaine is the consequence of the death or modification of the leucocytes.

Book Notices.

TUBERCULOSIS OF BONES AND JOINTS. By N. Senn, M.D., Ph.D., Professor of Practice of Surgery in Rush Medical College; Professor of Surgery in the Chicago Polyclinic; Attending Surgeon Presbyterian Hospital; Surgeon-in-Chief St. Joseph's Hospital; President of the American Surgical Association; President of the Association of Military Surgeons of the National Guard of the United States; Permanent Member of the German Congress of Surgeons, etc. Illustrated with 107 engravings (seven of them colored). In one handsome royal octavo volume; 529 pages. Extra cloth, $4.00 net; sheep, $5.00 net; half-russia, $5.00. Philadelphia: The F. A. Davis Co., Publishers, 1231 Filbert St.

Tuberculosis of bones and joints is such a common affection that a large percentage of the clinical material of the surgeon and the general practitioner is made up of such cases.

The tubercular nature of most of the chronic affections of bones and joints is not as freely accepted and as fully realized as it should be by the mass of the profession, and consequently a correct diagnosis is often not made before the disease has become incurable.

The successful treatment of these affections depends largely on an early correct diagnosis and the adoption of a timely, rational local and general treatment in consonance with the true nature of the disease.

The object of the author in writing this book has been to collect from recent literature the modern ideas on tubercular disease of bones and joints and present them to the reader in a condensed form, mingled, in appropriate places, with the results of his own experience. Old authorities are occasionally quoted for the purpose of showing the contrast between the old and recent views regarding the ætiology and nature of this form of bone and joint disease.

Dr. Senn's previous contributions to surgery are already well known to our readers. His reputation for original research and exhaustive consideration of subjects he investigates has given him a unique place among surgeons. By those interested in this important branch of surgery the views of Dr. Senn will be read with avidity.

ACNE AND ALOPECIA. By L. Duncan Bulkley, A.M., M.D., Professor of Diseases of the Skin, New York Post-Graduate Medical School; Physician to the New York Skin and Cancer Hospital, etc. Published by Geo. S. Davis, Medical Publisher, Detroit, Mich. Price, postpaid: Paper, 25 cents; cloth, 50 cents.

In this little book at attempt has been made to present the subjects of acne and alopecia in as clear, concise, and practical a manner as possible. If there be any excuse needed for presenting them together in one book, it is found in the great frequency of the two conditions, and the difficulties often encountered by the general practitioner in their management.

No attempt has been made to exhaust either subject, and no references are given to authorities, nor are any abstruse or theoretical subjects considered. The desire has been only to present the subjects as they appear to one daily engaged in relieving both conditions, and to render aid to others having fewer clinical advantages in this line of practice.

Acne and alopecia are perhaps the most frequent of the skin diseases entrusted to the care of the general practitioner. This plain, lucid, and practical consideration of their best modern treatment must commend itself to all who meet these cases, as the physician able to afford relief will often add as much to his reputation as if he had successfully performed some major operation.

A MANUAL OF MEDICAL JURISPRUDENCE AND TOXICOLOGY. By Henry C. Chapman, M.D., Professor of Institutes of Medicine and Medical Jurisprudence in the Jefferson Medical College of Philadelphia. With 36 illustrations, some of which are in colors. Published by W. P. Saunders, 913 Walnut street, Philadelphia. 1892. Price, $1.25

The present manual embraces essentially the course of lectures on Medical Jurisprudence delivered by the author to the students of the Jefferson Medical College during the session of 1891 and 1892. It was prepared, at the request of the students, in the hope that it would assist them as well as others in the study of this most important branch of medicine.

The necessarily prescribed limits of the work permit only of the consideration of those parts of this extensive subject which the experience of the author as coroner's physician of the city of Philadelphia, for a period of six years, leads him to regard as the most important for practical purposes.

The author has succinctly afforded in this book a class of information indispensable to the physician who is frequently called to testify in emergency cases without time to consult the more elaborate works, and will find this a most convenient and ready mode of reference to the essential facts when asked to decide such questions as positive signs of death, the character and significance of blood stains, the cause of death, rape, fœticide, infanticide, signs of pregnancy, insanity, feigned diseases, modes of poisoning, and evidences of poisoning derived from symptoms, etc.

A MANUAL OF MEDICAL JURISPRUDENCE. By Alfred Swaine Taylor, M.D., F.R.S. Revised and Edited by Thomas Stevenson, M.D., London, Fellow of the Royal College of Physicians of London, Lecturer on Medical Jurisprudence and on Chemistry at Guy's Hospital, Examiner in Forensic Medicine in the University of London, External Examiner in Forensic Medicine in the Victoria University, Official Analyst to the Home Office. Eleventh American Edition, edited with citations and additions from the twelfth English edition, by Clark Bell, Esq. Pages 790. Published by Lea Brothers & Co., Philadelphia. 1892.

This edition is an entire revision of all prior American and London editions, and includes the admirable work with which Dr. Stevenson has enriched the twelfth English edition.

Much new matter has been added; many portions of the work have been amended, and some parts have been re-written. In making additions upon legal questions and the present state of the law bearing on medico-legal matters, the editor has carefully cited nearly seven hundred cases and authorities to aid counsel in preparing briefs and to extend the sources of information for medico-legal jurists.

This standard classical work is doubtless already well known to our readers. Its appearance, amended and revised to date, will excite new interest in it, and those who desire to keep pace with the latest laws of medical jurisprudence must necessarily add it to their library.

Notes and News.

The Oldest Herbarium in the World.—

The oldest herbarium in the world is preserved in the Egyptologist Museum of Cairo, and is composed of leaves and flowers placed from 3,000 to 2,000 B. C. under the outer ties of the mummy-wrapper and on the sides of the mummy between it and the grave cloth, or twined in garlands around the head. We find that the same class of flowers are now common in Egypt—the blue and white lotus, the red poppy, oriental larkspur, hollyhock, the yellow flowered *Sesbania Egyptiaca*, crown chrysanthemums, safflower, pomegranate flowers, willow leaves, grasses, peppermint, etc. In the coffin of the so-called Kent mummy (20th dynasty) celery was found mixed with lotus leaves and flowers. The general conclusion drawn from this herbarium is that, whatever changes may have taken place in the climate of other portions of the world, there has been no perceptible change in that of the valley of the Nile for the past four thousand years. The stories told of the fertility of seeds taken from Egyptian coffiins are probably fables, as the seeds were all partially roasted before being placed in the tomb.—*N. Y. Medical Times*, October, 1892.

A New Local Anæsthetic.—

A new local anæsthetic has recently been isolated by Giesel from the leaves of the small-leaved coca plant of Java. Liebermann has proved that this base is benzoyl ψ tropeine, which bears no reiation to the cocaine group, but is chemically closely related to atropine. It is called "tropsin" for brevity. Professor Schweigger, of Berlin, after several months' experience with tropsin in eye surgery, reports that: 1. A 3-per-cent. solution produces complete corneal anæsthesia more rapidly than cocaine. Iridectomy could be done painlessly two minutes after putting three drops into the eye. 2. Anæsthesia lasts from three to six minutes for each instillation, and no further prolongation can be produced save by a fresh dose. 3. Mydriasis is absent, or but slight. 4. Ischæmia never occurs, but sometimes there is a passing slight hyperæmia, and a little smarting unless normal saline solution be used as a solvent. 5. No injurious symptoms were ever observed. 6. In removal of foreign bodies, tropsin seems, from its quicker action, far preferable to cocaine. Dr. Silex, assistant in the Polyclinic, has obtained similar results.—*N. Y. Medical Record.*

An Ode to the Oyster.—

You're here,
My dear—
Luscious, juicy, plump and fat
As shiny as a new silk hat,
Or boot that's just been polished.

As sweet
A treat
As balmy breezes from the South,
You melt like butter in the mouth
When your outside's demolished.

Most fine
Divine,
With pleasure now we gaily prance;
For oh, your placid countenance
Is open and forgiving.

Yum, yum!
Though dumb,
Your silent eloquence appeals
Unto the taste of him who feels
That you make life worth living.

—Krys in October *Food.*

The Medical History of Columbus.—

Columbus is said to have been tall, very strong physically, and to have had red hair, blue eyes, and a ruddy complexion. He married rather young, but later in life formed irregular relations with a lady who bore him a son. He must have been a man of great vitality, and was probably a good liver when he had the opportunity, for he suffered many years from the gout and died finally from that disease. Like most men of powerful physique, and great ambition and energy of character, he probably indulged himself freely, or at least neglected to be prudent of his health. His exposures and privations do not seem to have been altogether the cause of his early physical prostration, for though he contracted "fevers," it is gout, we are told, which kept him an invalid and finally killed him at the comparatively early age of sixty.—*New York Medical Record.*

A Filter for Bacteria.—

The Kieselguhr filter is made from diatomaceous earth, which has had the animal constituents destroyed by heat, and is formed into a hollow cylinder, closed at one end. This cylinder is placed in a metal receptacle and the whole covered with a metal cup, perforated at the centre for the exit of the filtered water. The water is admitted by a cock at the side and near the top of the case containing the cylinder, and, forced by the pressure of the main from the outside to the inside of the filter cylinder, finds exit by the tube in the centre of the cup. Weyl has examined bacteriologically the water, before and after it passed through this filter, and comes to the following conclusions: First, that this filter, after rigorous tests, is found to give a filtrate more certainly free from sediment than any other house filter on the market. Second, it is easily cleaned; the cylinder may be washed with a stiff brush, and later treated with concentrated hydrochloric acid. The fresher and cleaner the cylinder, the greater the amount of water filtered. The cylinder may be easily sterilized by boiling. We think there is no doubt that this filter will intercept the pathogenic bacteria.—*Berl. Klin. Wochenschr.*

The Second International Congress of Physiologists.—

The second triennial International Congress of Physiologists this year held its sittings at Liége, with Professor Holmgren (Upsala) as President, in the Physiological Institute of the University under Professor Leon Frédéricq. It was agreed to hold the next congress, in 1895, at Berne, in the Physiological Institute of the University under Professor Hugo Kronecker. The general secretaries chosen for the next Congress are: For the French language, Professor Arloing; for the German language, Professor Exner; for the English language, Professor Sherrington.

A Law to Suppress Tuberculosis.—

The New York Legislature recently enacted a law to suppress tuberculosis in the milch cow. By this law the health inspectors of the State are authorized to cause to be killed any animal found to be affected with tuberculosis; all the cattle in the State to be inspected. The State will reimburse the owner for the actual value of the cow killed. An appropriation of only $5,000, however, was made for this purpose. This law will affect the largest industry in the State of New York, the milk-production of which is greater than that of all the other States put together, there being 1,600,000 milch cows in the State. About $40,000,000 worth of milk is consumed in the State yearly.—*Cincinnati Lancet-Clinic.*

Death Under Pental.—

The death of a German opera-singer is reported by the British Medical Journal, July 9, 1892, to have recently occurred after the administration of pental for the extraction of a tooth. Eight or ten drops were given upon a face-piece and the tooth removed, whereupon the patient fell back with a loud shriek and never recovered consciousness, attempts to restore animation proving of no avail. The official examination showed that the brain, lungs, and vessels were healthy; there was, however, some amount of fatty degeneration of the heart, and death was attributed to syncope, probably due to the condition of that organ.

The American Orthopedic Association.—

At the recent meeting of the American Orthopedic Association, held in the City of New York, Sept. 20, 21 and 22, 1892, the following officers were elected to serve for the ensuing year: President, Dr. A. J. Steele, St. Louis; Vice-Presidents, Dr. Samuel Ketch, New York, Dr. Arthur J. Gillette, St. Paul; Treasurer, Dr. A. B. Judson, New York; Secretary, Dr. John Ridlon, 34 Washington St., Chicago. The next annual meeting will be held in St. Louis the third week in September, 1893.

Registration at the University of Michigan.—

The total registration is 2,564, an increase of 86 over last year at this time. The official figures of the University are as follows in the various departments: Literary, 1,341; medical, 330; law, 364; pharmacy, 74; dental, 188; homœopathic, 67; total, 2,564. The total is not quite as large as expected, but exceeds that of last year at the same time by 86 names. Rah! Rah! for the U. of M.

Therapeutic Brevities.

Injections of Testicle Juice in Cancer.—Brown-Séquard (Sem. Méd., Sept. 7, 1892), after referring to his previous reports on the value of hypodermatic injections of testicle juice in increasing the energy of the nervous centres, improving nutrition and secretion, and giving tone and strength, said he had hitherto purposely abstained from speaking of the effect of the remedy in cancer, although he was acquainted with facts that appeared to demonstrate with certainty the happy influence of the injections in patients suffering from malignant disease. Facts which had recently come to his knowledge, however, no longer permitted him to keep silence. He then gave particulars of a case communicated to him by Dr. Labrosse, of Mustapha in Algeria, who had treated by injections of testicle juice (rabbit's) a woman with cancer of the womb beyond operation. After a dozen injections the patient, who was in the cachectic stage and was so weak that she could not leave her room, was able to walk about and go out on foot or driving, which she had been unable to do for a year. Moreover, under the influence of the injections alone, the discharge, which had been very profuse and offensive, ceased altogether. Brown-Séquard promises to publish further facts of the same nature at some future time. —*British Medical Journal.*

Phenacetin for Senile Vesical Irritation.—Dr. Traill Green has reported in the University Medical Magazine for June the successful use of this drug in cases of frequent micturition in the aged. Prompt relief was frequently obtained after a 10-grain dose taken at bedtime. The soothing action of the remedy seemed not to be limited to the nocturnal irritability, but was prolonged over upon the following day, so that the micturition intervals, both night and day, became nearly normal. In two of his cases there was a reduction from six and seven micturitions nightly to one only. One patient for a time did not need to get up at all during the night. No effect was reported as to the amount of urine secreted, and it did not appear to be necessary to use the phenacetin continuously in order to get the desired result. There were no effects from this use of the drug that would appear to contra-indicate it even among those patients who were enfeebled by their weight of years. The use of the drug is said not to be advisable in cases of prostatic enlargement.—*New York Medical Journal.*

Hydriodic Acid in Special Practice.—Dr. J. Hobart Egbert, in a practice limited to diseases of the eyes, ears, nose, and throat, has obtained good results with this remedy. Although the iodides are very diffusible and are rapidly excreted, yet they are irritant, unstable, and offensive to the taste and the stomach; they frequently cause violent coryza, with soreness of throat and eyes, headache, profuse mucous discharge, and renal irritation. Their protracted use leads to anæmia, emaciation, and general vital depression. He believes that these disadvantages can be reduced to the minimum by use of the syrup of hydriodic acid, which has a pleasant acidulous taste, can be advantageously combined with the vegetable tinctures and syrups, and contains a definite amount of absolute hydriodic acid; that is to say, each fluidrachm contains as much iodide as five grains of the iodide of potassium.—*American Journal of the Medical Sciences.*

Arrest of Vomiting.—L. Sabbatani (Bull. d. Sci. Med. di Bologna, August, 1892) finds that it is easy to stop vomiting in dogs, except after the ingestion of sulphate of copper. Having induced vomiting in six dogs by means of hypodermatic injections of apomorphine, he was able to stop it without difficulty in two cases by making the animals inhale chloroform vapor, in two others by placing a sponge saturated with ammonia close to the animal's nose, and again in two by applying the faradic current. In a second series of experiments made on the human subject, however, the results were inconclusive. The arrest of vomiting was found to be much less easy in man than in the dog, and Sabbatani succeeded in only two out of five cases; in the remaining three, emesis could not be checked, either by means of ammonia or the electric current.—*British Medical Journal.*

The Antiseptic Treatment of Gonorrhœa.—Dr. Vatier (La Riforma Medica, No. 100, 1892), in order to avoid the pain which corrosive sublimate produces when used as an injection strong enough to exercise an antiseptic effect in gonorrhœa, associates antipyrin with it in the following formula:

℞ Antipyrin, 5 grammes. ʒ iss.
Corrosive sublimate, gr. j.
Aqua, Oj.

This combination of remedies permits one to begin the treatment at any period of the disease. It may also be used as a preventive. The solution should be allowed to re-

main not less than half an hour in the urethra. Inject three or four times a day. In general, inject as often as one urinates.—*Cincinnati Lancet-Clinic.*

A Case of Tetanus Treated with Antitoxin.—Finotti (Wiener Klin. Wochenschrift, No. 30, 1892) reports the following case: A man received a compound dislocation of the distal end of the ulna. On the fifteenth day after the injury, notwithstanding the wound had been dressed antiseptically, the patient developed the first signs of tetanus. The exudation from the wound was of the nature of serous pus. Attempts to cultivate the tetanus bacillus from this pus failed, and inoculation of guinea-pigs with the exudation and with the urine of the patient failed to cause symptoms of tetanus in the animals. The first day that tetanus symptoms appeared, the hypodermatic administration of antitoxin was begun. The patient had a very severe attack of tetanus with all the typical symptoms. These disappeared, however, on the twelfth day of the disease. No medication was used except the hypodermatic injection of antitoxin, and 75 grains of this were used in twenty-three injections.—*University Medical Magazine.*

Treatment of Chorea.—Dr. Baumel believes that in the great majority of cases of chorea the predisposing cause is anæmia, the exciting cause being dentition, especially the evolution of the large molar teeth from the sixth to the fourteenth years. He uses the following:

℞ Potassii bromidi, grs. xxx.
Syr. aurant. cort., ℥ j.
Aquæ, ℥ iij.
M. Sig.: To be taken in the course of twenty-four hours.

In addition to this he gives 1 grain of reduced iron morning and evening, together with a tablespoonful of decoction of cinchona in a glass of sweetened milk.—*Medical Record.*

Sea-sickness.—The London Lancet concludes an article on this subject: "Successful treatment cannot be guaranteed by any one method or panacea. Recumbency, pure deck air, moderately firm bandaging of the body, are all useful. Drugs have their place and their partial utility; but, as we have already suggested, there is no remedy equal to a lee shore. Nothing can be much more depressing than sea-sickness, and for this reason we should strongly advise all weak persons not to encounter, if possible, the risk of its occurrence. It is astonishing how soon and how completely those who are favored with a fair measure of constitutional elasticity recover from its depression.

Jambul in Diabetes.—I wish to thank you for a suggestion from you which I saw some months ago. You said you had found jambul good for saccharine diabetes. I had a case, and was grasping for straws. Got some of Parke, Davis & Co.'s jambul. The symptoms commenced to disappear at once, and soon the thirst, excessive diuresis, and many other unpleasant symptoms were gone. Since last month has taken no treatment, and eats whatever food she wants. It should be better known by the profession.—V. E. Lawrence, M.D., in *Philadelphia Times and Register.*

Treatment of Chronic Rhinitis.—

SNUFF.

Menthol,	
Citric acid,	
Lithium carbonate,	equal parts.
Powdered benzoin,	

Five or six pinches daily for each nostril.

—Monin in *Merck's Bulletin.*

Formaldehyde as a Disinfectant.—Formaldehyde, or formic aldehyde, is said to be remarkable for its antiseptic powers and sterilizing properties. Trillat finds that "urine mixed with this fluid is incapable of putrefaction. Its sterilizing power in broth containing bacillus anthrasis is still more marked than that of corrosive sublimate."—*Druggists' Circular and Chemical Gazette.*

Vomiting in Pregnancy.—Dr. Weil recommends that ten drops of a 20-per-cent. solution of menthol in olive-oil, dropped on powdered sugar and sugar sprinkled over it, be taken whenever nausea appears. By this means relief can be obtained, he says, in the most severe cases of apparently uncontrollable vomiting.—*Medical Record.*

Local Anæsthesia.—Local anæsthesia is said by Dobisch to be readily produced, in about one minute, by a spray of menthol, one part; chloroform, ten parts; and ether, fifteen parts. The anæsthesia continues for from two to six minutes, and may be prolonged indefinitely by the renewal of the spray for a few seconds at a time, as needed.—*Medical Record.*

Medical Progress.

TREATMENT OF COCAINISM.—Dr. J. B. Mattison contributes to the New York Medical Record, Oct. 22d, 1891, an article on this subject, in which he summarizes the treatment as follows:

In recent cases the drug can be quit at once, and the resultant reflex irritation met with phenacetin, 10- to 20-grain doses, to control pain and unrest, and chloralamid, 30 to 60 grains, to secure sleep. Should more potent remedies be needed, 1- to 2-grain doses of codeine subcutaneously. As an anodyne, paraldehyde, 30 to 120 minims, in capsule or elixir, or sulphonal, 20 to 40 grains, with or without hydrobromate of hyoscin one one-hundreth to one-twentieth grain as a soporific. Later, galvanic and faradic *séances*, with internal tonics and favoring conditions for several months, are required.

In marked cases more robust measures are essential. If the body well-being be not greatly impaired—otherwise a tonic course should precede rapid reduction—six to ten days, coupled with a minor degree of preliminary sedation after the writer's method ("The Treatment of the Morphine Disease"), can be used. As a partial substitute for the cocaine, caffeine-sodii benzoas, 1 to 5 grains hypodermatically, will be found of value; and for the pain and unrest, as well as insomnia, phosphate of codeine in full doses, 2 to 3 grains subcutaneously, or double by mouth, will prove effective. Morphine should not be used. Alcohol should be withheld unless imperative. If so, it may be given as alcohol—not brandy or whiskey—and always with milk or other food, or hypodermatically. The risk, in treating these cases, of causing a new form of drug addiction should never be forgotten.

After the acute effects of quitting have subsided, the same indications for treatment will present as after morphine-ending, to be filled along like lines in the same way as detailed in another paper of the writer.

In some cases, more so than in the morphine disease, restraint will be needed. For reasons stated, this should be as mild and brief as is consistent with the welfare of the patient, the object being to re-educate and restore the depressed will-power, and this can be done in some cases by mildly coercive measures rather than the reverse. With others, however, absolute and prolonged restraint is imperative. The importance of protracted roborant *régime*, varied and constant, with freedom from work and worry, obtains more largely in this and morphine cocainism, than any other drug disease. The peculiar, overmastering fascination of cocaine, its strong, almost resistless, tendency to retaking in the early weeks or months of abstinence, make this essential. In marked cases six to twelve months, or even longer, must be taken in which, if at all, to get thoroughly well. The importance of prolonged hygienic care and favorable surroundings, after active medical treatment is ended, in these cases, cannot be overestimated, and *they are absolutely essential* to effect a lasting cure.

HEADACHE DUE TO EYE-STRAIN.—Dr. William C. Bane, in the Medical News, publishes a paper on this topic:

It has been my rule, in examining persons with errors of refraction, to learn of any eye-ache or headache, especially frontal headache, that existed before wearing glasses, and after correction to request the patients to report in a few weeks whether or not they had been relieved of the unpleasant symptoms. In preparing the following table I have excluded, with a few exceptions, cases that failed to report, though I am satisfied that many of them obtained, in the correction of their ocular defects, the desired relief:

Form of Error	Males.	Females.	Number of cases.	Number with eye ache.	Relieved of eye ache.	Partially relieved of eye ache.	Number with head ache.	Relieved of head ache.	Partially relieved of headache	Failed to report.
H.	17	31	48	41	35	5	26	21	5	1
M.	5	5	10	6	4	2	8	6		
H. As.	11	39	50	43	32	6	25	13	6	
H. ○ H. As	16	46	61	45	41	2	29	25	3	2
Mixed As.	9	17	26	23	20	1	18	10	1	3
M. As	31	30	61	46	41	5	40	34	3	2
M. ○ M. As.	15	29	44	31	28	3	27	21	5	1
Total with As..	..	..	242	188	163	18	169	115	18	9
Total	..	..	300	225	202	26	177	142	23	10
Per cent..	..	..	..	..	78.3	85.1	..	57	83.	13.4

A number of reports have been furnished the profession, giving the percentage of cases of headache due to ocular strain, in which statements have been made that correction of the errors gave relief; but few, however, have given the percentage of the cases thus treated that were relieved.

We have learned from the investigations of others that 90 per cent. of the civilized race have defective eyes. I have shown that 57 per cent. of my cases with errors of refraction suffered with headache; also, that 79.8 per cent. of these were relieved by the

correction of ocular defects, while 23, or 13.4 per cent., were partially relieved.

From the foregoing facts it is patent that we have in a very large percentage of our race a fruitful source of reflex headache, and that we have it in our power to render the aid to nature that will relieve a great deal of suffering, not to mention the improvement in vision to be gained by many in the *proper* adjustment of glasses to their eyes. I say proper adjustment of glasses, for, I am sorry to say, a great deal of imperfect refraction-work is done. Physicians are too apt to refer to an optician the patients who they suspect need glasses. I am informed that the opticians of this city add to the price of their spectacles their charge for the examination—an examination that, owing to their lack of knowledge of the anatomy and physiology of the eye, cannot be perfect. Then, again, persons under 35 or 40 years of age cannot be properly corrected unless the accommodation is paralyzed. Of the 300 cases reported in my table, 225 were under 36 years of age; in all atropine, hyoscyamine, or homatropine was used. In my table I omitted cases in which only prisms were prescribed, but for quite a number of the cases prisms were combined with the correcting-glass, or the sphericals were decentred.

Of patients with headache due to eye-strain we cannot say with Ambrose Paré: "I tend him, God cures him."

Strong Hydrogen Peroxide Solutions Locally in Diphtheria.—In the Boston Medical and Surgical Journal, Francis H. Williams, M.D., publishes a paper on this subject read before the Boston Society for Medical Improvement.

The peroxide of hydrogen has the unique and necessary quality of disintegrating the membrane and thus rendering the bacillus accessible. As it only attacks dead organic matter, the healthy tissues are not lacerated as is the case when mechanical means are used to remove the membrane.

The acid peroxide of hydrogen solutions are an effective germicide against the bacillus of diphtheria, and not toxic to the patient.

The syringe employed is simple in construction and inexpensive; it can be kept perfectly clean and is not attacked by solutions which corrode metals. With it one can easily reach all parts of the throat which are to be seen without a mirror.

As regards the frequency of the application of the germicide, I can give no rule that applies to all cases. The problem is to treat early, to disintegrate and clear off the membrane by means of the spray and syringe. In the syringe a 100- (16 per cent.) or, more often, a 200-volume (32 per cent.) solution should be used, applications being made, of a few drops each, into and underneath the membrane wherever needed. This should be done daily from one to three times, or more often, for the first day or two, after which the spray alone may suffice. The spray should also be used in 50- (8 per cent.) or 100-volume (16 per cent.) strength once in four hours, although it may be desirable to use it oftener in some cases. Where the membrane yields readily to the spray, this may be used at first to clean away; remainder may be cleared by the syringe. The treatment, to be effective, must be energetic and well carried out in the early days. Besides treating the membraue locally, it is well to use antiseptic prophylactic treatment in the pharyngeal and nasal regions, such as douches or sprays of 15-volume (2.4 per cent.) peroxide of hydrogen solution.

Any local treatment to be efficient must be applied early and at frequent intervals, but the strong peroxide solutions must only be applied by the physician himself; they cannot be properly used by the relatives or attendants. During the first few days, therefore, this takes more of the physician's time than other ways; but the course of the disease is much shortened in suitable cases, that is, where the patient is seen early and the membrane is accessible. The point is to concentrate the attack before the patient is poisoned, and thus save him from a prolonged illness. Good nursing and proper and sufficient nourishment are not to be omitted.

The Treatment of Baldness.—The public always welcomes with eagerness anything that is new and hopeful pertaining to the treatment of baldness. While the hopes that may be thus raised are soon dashed to the earth by a few personal experiments or the object-lesson of a consultation with eminent but thin-haired dermatologists, it is not wise to suppress the new discoveries; for science may yet triumph over alopecia as it has over even more formidable obstacles.

This much is certainly being done: baldness is being very richly classified and its clinical manifestations accurately mapped out. Fournier gives us two groups and nine classes of baldness. That there are nine muses and nine kinds of baldness, is a fact full of suggestiveness and consolation to the poetic mind.

We shall not attempt to follow Fournier,

or to go deeply into the ætiology and remediology of alopecia. There seems to be a general opinion that, leaving out the post-infective forms, most kinds of baldness are neurotrophic, parasitic, or senile. For senile baldness we cannot expect a cure; the aged themselves accept their deciduousness as a part of the natural course of things. Of the other forms, Dr. A. H. Ohmann-Dumesnil, in The Practitioner, has a good deal that is hopeful to say. For the pre-senile or neurotic baldness he advises the following pill, taken twice daily:

℞ Strychniæ sulph., gr. $\frac{1}{30}$.
Ferri redacti, gr. j.
Quiniæ bisulph., gr. j.

To this he adds: hypophosphites and $\frac{1}{8}$ to $\frac{1}{6}$ grain of pilocarpine hydrochlorate at bedtime. For the parasitic forms of alopecia areata, Dr. Dumesnil advises a 3-per-cent. solution of creolin for the entire scalp, and locally an ointment composed of—

Hydrarg. perchlorid. corrosivi, gr. j.
Lanolini, ʒ j.

A more drastic measure, which he recommends for alopecia areata, is one first suggested, we believe, by Dr. L. Duncan Bulkley. It consists in painting the affected area with pure carbolic acid. This application Dr. Dumesnil applies twice a week, with results which he asserts have so far been uniformly gratifying.—*New York Medical Record.*

Sexual Hypochondriasis and Perversion of the Genesic Instinct.—Dr. Irving C. Rosse, of Washington, D.C., read a paper with this title, which was reported in the Medical Record. Omitting reference to such subjects as spermatorrhœa, venereal excesses, malformations of the genital organs, and the high degree of excitement often found among the insane, he limited his paper to the consideration of the manœuvres of either sex to produce venereal orgasm independently of the conditions of normal coitus, and known comprehensively as genital abuse. Of all hypochondriacs of either sex, those who refer their sufferings to the genital organs, such as the onanists, nymphomaniacs, syphilophobes, etc., are the most miserable. It is an error to suppose that aberration of the genesic instinct is confined to our species, time, race, or latitude. Bestiality or sodomy has perhaps existed from all time. Juvenal mentions that donkeys were much sought after by women. A quotation from Plutarch indicates that there were relations between animals and human beings—men and women—in the Latin Empire. In our day this crime is less prevalent, though far from rare in large cities. The speaker mentioned numerous instances of sexual perversion which had come under the notice of the police in various cities in this country and Europe. A study of these cases shows that the question of sexual perversion is one of social hygiene touching mental pathology in many points. Lawyers and doctors and juries want to know whether such cases are criminal in their nature or are the result of insanity. Physicians recognize that continuous suggestion, or the reading of lewd literature, or excessive indulgence in fondling embraces under improper circumstances, etc., do affect the lower lumbar reflexes in such a way as to bring about sexual hypochondriasis, not to mention their influence as wide disseminators of immorality and as teachers of crime. Many of the methods of societies for preventing vice and bringing about prohibitory legislation as to vicious literature, etc., though well meant, are both reprehensible and impracticable. Overzeal leads to false philosophy and sophistry like that of the prohibitionists who would enact sumptuary laws. The treatment of such cases of unnatural practices as have been referred to consists in prevention and education, with employment of proper medical and surgical measures. Self-control should be included, especially about the epoch of puberty. As an adjuvant nothing is better than gymnastic and athletic training. A verification of the judiciousness of this advice is often found in champion athletes, many of whom are temporarily impotent.

Cimicifuga and Viburnum Prunifolium.—Mrs. V——, married, æt. 32, mother of four children, consulted me in the summer of 1891. She presented a well-marked rheumatoid arthritis, involving shoulders, elbows, and phalanges of upper extremities, and hips, knees, and toes—in fact, about all the articulations. She walked bent forward, elbows and knees stiff and painful, phalanges distorted and having the characteristic appearance of bird's claws, tendons being contracted and rigid. Knee- and elbow-joints enlarged. Of course this condition rendered locomotion and physical effort painful; but, to make matters worse, there was connected with it serious preversion of the menstrual function, characterized by irregular, scanty, or excessive flow. History covered a period of eight years.

The following prescription was made up

and ordered to be taken in 40-drop doses three times a day, size of dose to be increased:

℞ Ext. cimicifugæ racemosæ, }
Ext. viburni prunifol., } aa ℥ ss.

M. Sig. Forty drops to a teaspoonful three times a day.

In two weeks' time decided amendment was noticeable, there being less soreness and stiffness of joints, and consequently better locomotion. In a word, under above treatment unmodified, improvement went steadily on, muscles acquired in a great degree their wonted energy, tendons lost their acquired rigidity, articulations were unlocked, and deformity of phalangeal joints became less apparent.—R. B. McCall, M.D., in *American Therapist*, September, 1892.

AGATHIN: A NEW ANTINEURALGIC AND ANTIRHEUMATIC.—"Agathin" is the name proposed for salicyl-aldehyd-methyl-phenyl-hydrazone, a substance first prepared about half a year ago by I. Koos, a chemist of Frankfurt-on-the-Main. It is described (Pharm. Zeitung) as occurring in small, white, odorless and insipid leaflets, which melt at 72° C. (161.6° F.) and are insoluble in water, but soluble in alcohol, ether, and benzene; its formula is C_6H_4. OH. CH: NH. CH_3. C_6H_5. According to a number of practitioners of Frankfort-on-the-Main (E. Rosenbaum, Ebeling, J. Schmidt, L. Lacquer, and L. Loewenthal), agathin is possessed of antineuralgic and antirheumatic properties: in doses of 0.5 gramme (7½ grains) two or three times a day, it has given good results in sciatica, in trigeminal neuralgias of grippal or other origin, in a case of very intense neuralgic pains in the chest and back of a diabetic patient, and in articular rheumatism. On several occasions the agathin is reported to have been efficacious after all the other analgesics previously employed had failed; on the other hand, a number of cases proved more or less refractory to the medicament.

The action of agathin does not manifest itself immediately, but first in a few days—when 4–6 grammes (1–1½ drachms) of the medicament have been taken. In daily doses of 1.5 grammes (23 grains), agathin is said to be well borne, as a rule; sometimes, however, it gives rise to transient headache, or to slight nausea which yields to the employment of lemonade.—(Agathin is not as yet in this market.)—*Merck's Bulletin.*

MODE OF ACTION OF CALOMEL INJECTIONS.—P. de Michele, M. D., in a historical study of this subject, reproduced in Merck's Bulletin, August 15, 1892, thus summarizes his conclusions:

That calomel, administered by injections, is better tolerated, even in strong doses, than any other mercurial preparation; that it always produces in the tissues an inflammatory process with a subacute development, the final issue of which is a small residual and persistent cicatrix; that a dose of about 20 centigrammes of the remedy in man requires for its transformation into albuminate and its absorption about 15 to 20 days; that iodide preparations administered at the same time by way of the stomach accelerate considerably this transformation, so that they ought not to be used without great caution; that on account of its great efficacy, admitted at the present day by all clinicians, its moderate cost, and its capability for effecting the specific cure by two or three injections at long intervals without the least danger, the Scarenzio-Smirhoff method is not only a most valuable resource, but also one of the most important improvements introduced into anti-syphilitic therapeutics in the last thirty years.

CLINICAL HISTORY AND TREATMENT OF TWO THOUSAND AND TWELVE CASES OF ALCOHOLISM, OF WHICH EIGHTY-SEVEN WERE MANIACAL.—Thomas S. Latimer, M. D., in Medical News, summarizes his conclusions of a study of these cases as follows:

That the clinical phenomena attending excesses in the use of alcohol are the direct result of over-stimulation, and are not due to the abrupt withdrawal of the stimulus.

That though ability to swallow and retain stimulants is frequently wanting, the desire for them almost uniformly persists.

That alcohol in any form or quantity is unnecessary in the treatment of such cases, and is usually hurtful.

That the absolute and immediate withdrawal of alcohol is of the first importance in the treatment of all the symptoms due to its excessive use, even in cases characterized by great feebleness and inability to partake of food.

That forced feeding is rarely necessary, and is of doubtful utility in most cases.

That for the protection of the patient no kind of bonds is called for, and when necessary for the protection of others, or for the contents of the room, they injuriously affect the mental state of the patient.

The Medical Age.

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Original Articles.

THE TREATMENT OF APPENDICITIS.*

BY DR. CHARLES TALAMON.

As long as appendicitis was called typhlitis and it was believed that the lesions were seated in the cæcum, the treatment remained almost exclusively medical. Indeed, it could not be otherwise, for no one would have thought of incising the large intestine. The surgeon was not called till the pus, after doing more or less mischief internally, came to point under the skin in some part of the abdominal wall, and then it was generally too late to save the patient.

We must, however, remember that thirty-five years ago Dr. Lewis, of New York, recommended an early incision. He had collected forty-seven cases of suppurative perityphlitis treated by the ordinary methods, with only one cure. He logically concluded that these methods were insufficient; that it was not necessary to wait till the pus collected and pointed in plain sight before operating, and that a free opening should be made as soon as the presence of pus in the iliac fossa was suspected.

Twenty years later, in 1875, another New York surgeon, Dr. Gouley, insisted on the necessity of early opening of the abscess to prevent its rupture into the peritoneal cavity or elsewhere. The incision should, he said, be made as soon as the symptoms become threatening and even before fluctuation is manifest (as early even as the seventh or eighth day). He gave statistics of twenty-five cases of typhlitis occurring in England and America, which were treated by an early incision; of these there were seventeen recoveries and eight deaths.

A more precise knowledge of the causes and seat of the suppuration, and the discovery that appendicitis is so often perforative, naturally gave impetus to the surgical treatment of the disease.

We have seen that as early as 1827, in his remarkable memoir on the diseases of the appendix, Melier had foreseen the part that surgical intervention was to play in the treatment of inflammations of the appendix. "If," said he, "it were possible to make a certain diagnosis of these affections, we should be able to save all our patients by means of an operation. Possibly the day will come when we shall be able to do this."

The prevision of Melier is to-day realized—we may even say exceeded, for surgeons have now attained such a degree of confidence that many (and I allude in particular to certain *American* surgeons) no longer wait for the indications formulated by the more conservative authorities, but propose an immediate laparotomy for every case that presents itself.

Naturally there has been a reaction against this zeal for the use of the knife. To the triumphant statistics of the surgeons, the physicians have replied by statistics no less decisive; for instance, those of Guttmann, where out of one hundred cases recorded as typhlitis and perityphlitis the medical treatment gave ninety-six (96) recoveries and only four (4) deaths.

We do not believe that this question can be decided by an appeal to statistics, for we never know how many mistakes statistics may cover. But in the presence of such figures as the above, even if we should have to admit a large proportion of mistakes of diagnosis and incomplete recoveries, we would still be warranted in concluding that medical means, and even expectancy, are not absolutely valueless, that the bistoury is not always the *ultima ratio*, and that henceforth we may at least try provisionally, in many cases, a less heroic mode of treatment.

This leads us back to the position before mentioned—that there exist divers forms of

*Extract from a volume to be published by G. S. Davis, entitled "Appendicitis and Perityphlitis."

appendicitis, and that the first duty of the physician is to make a precise differential diagnosis. Yet if we are to judge from the numerous discussions which have taken place in various medical societies at home and abroad, the surgeons, taking account only of cases where their intervention has been required, do not seem willing to admit the existence of more than one kind, namely, perforative appendicitis with peritonitis or suppuration.

Their reasoning seems to me to be as just as if, from the good results obtained by pleurotomy in purulent pleurisy, one were to conclude that every case of pleurisy is necessarily suppurative, and that the only treatment to be thought of in pleural inflammation is the free incision of the thoracic parietes.

MEDICAL TREATMENT.

We have said that appendicitis may be divided into medical and surgical. The appendicites properly medical comprehend those forms in which the inflammation is limited to the walls of the appendix, or gains by propagation the peritoneal membrane to a certain extent; *i.e.*, appendicular colic, simple parietal appendicitis, and appendicitis with partial fibrinous peritonitis.

The treatment of these kinds is indisputably medical — calmatives, evacuants, local antiphlogistics; we may add intestinal antiseptics.

The indication in appendicular colic is the same as in hepatic or nephritic colic, *i. e.*, to assuage the pain, which is due to the same cause as in renal or biliary lithiasis—the painful contraction of a musculo-membranous tube due to the presence of a foreign body. The subcutaneous injection of $\frac{1}{6}$ to $\frac{1}{3}$ grain of morphia meets this indication. In allaying the pain, it suppresses or diminishes the muscular spasm and the consequences of the reflex irritation starting in the appendix; and, in suppressing the spasm, it may facilitate the expulsion or return of the stercoral calculus into the cæcum.

The medical attendant will apply at the same time over the abdomen of the patient, hot poultices sprinkled with laudanum. If nausea and vomiting exist, effervescent drinks, menthol, little bits of ice, etc., may be prescribed.

The physician is rarely called to witness an acute attack of appendicular colic. When he reaches the patient, either the severity of the attack is over, or there remain only vague abdominal pains with a sensitive *point douloureux* in the right iliac fossa. Here the attention should be concentrated. If the fixed pain is but little marked, if the abdominal walls are relatively supple, the physician will continue the poultices, perhaps order a full bath, and administer an emollient or oleaginous enema. It would be useless to administer at this time a purgative, which might provoke new and unseasonable contractions and give rise to a second acute crisis by forcing back into the appendix the scybalous concretion now perhaps partly or completely disengaged.

If, on the contrary, there exist local signs of a severe appendicular irritation, if the iliac region is very painful and tender, if the muscular tension over this region is very marked, the application *loco dolenti* of a dozen leeches should be prescribed. It is certain that this local blood-letting always brings great relief; it is probable that it causes a *decongestion* or depletion of the walls of the appendix, at this moment turgescent and rigid, as if in erection, as the very early incisions of the American surgeons have often shown.

Profiting by this lull in the pain, the physician may administer a purgative dose of calomel or an ounce of castor oil.

On this question of the employment of purgatives in appendicitis, physicians are divided into two parties: the one favors their systematic administration, the other discards them from fear of favoring perforation. These are extreme positions; there is a proper mean between them.

At the onset it is well to refrain from purgatives, because at this moment the intestine, which is violently excited and under powerful contractions, might force still farther into the appendix the coprolith and effect its permanent lodgment there. At this period the fear of favoring perforation is legitimate, as the intensity of the appendicular inflammation is in the ratio of the degree of constriction exercised by the foreign body on the walls of the diverticulum.

But after the depletion produced by the

application of the leeches, the danger is much less, and a purgative may even be given with benefit. Not only does it empty the large intestine, which is always a relief to the patient, but it arouses the normal peristalsis of the muscular coats, which, in being propagated to the walls of the appendix (now become less engorged and less tense), may provoke the expulsion of the coprolith from the canal of the appendix.

We would recommend neither drastics which cause too violent contractions, nor salines which cause a serous secretion which is too abundant and does no good. Castor oil and calomel, producing milder effects, are more suitable. I prefer castor oil, as it more readily carries along the mass of hardened fæcal matters which have accumulated in the colon by the reflex paresis of the muscular coat. My method is to give it in doses of a teaspoonful every half-hour or hour till a full stool is obtained.

The days following, freedom of the bowels is kept up by laxative and antiseptic lavements, *i. e.*, lavements to which boric acid or naphthalin is added. To prevent intestinal fermentation and the formation of gases, it is also well to administer by mouth divers substances which favor intestinal antisepsis, such as salol, naphthol, betol, and benzonaphthol.

These means ordinarily suffice to stay the progress of a case of parietal appendicitis.

If a new inflammatory invasion takes place, and especially if this be complicated with the signs of a partial fibrinous peritonitis, it will be necessary to renew the application of the leeches and have recourse to frictions with mercurial and belladonna ointment. Opium may be given at the same time in doses of $\frac{1}{6}$ to $\frac{1}{2}$ grain, repeated two, three, and four times a day, to immobilize the intestine and prevent the extension of the serous inflammation. The application of an ice-bag to the abdomen also gives good results.

It is understood that from the very onset of the affection the patient must be kept rigorously in bed (dorsal decubitus), on a diet of milk or broths, or light gruel, etc.

The sojourn in bed should be continued some time after the cessation of all local pain. As long as you perceive in the right iliac fossa the little elongated tumor formed by the thickened and dilated appendix, the greatest prudence is indispensable, for it is not rare to see a recrudescence of the disease produced on the occasion of a strain, a violent movement of the patient, or too great haste in quitting the bed (the latter especially).

Ought the medical treatment to be employed in the surgical forms of appendicitis? I would reply emphatically: No! on condition that we are certain that it is really a case of perforative appendicitis with periappendicular suppuration. No one would think of favoring the resolution of an abscess of the subcutaneous cellular tissue by leeches, poultices, and mercurial inunctions. It would be foolish to attempt it under a pretext that the abscess is intraperitoneal.

But we have seen that it is often very difficult, not to say impossible, during the first few days to decide whether the appendicitis is perforative, and whether suppuration exists. During this first period, as long as perforation is not demonstrated, the physician not only can, but ought to, put in practice the means indicated above. If perforation has not yet taken place, there is nothing to prove that this treatment, suitably applied and in time, may not bring about the decongestion of the appendicular walls, and in consequence prevent the ulcerative process which ends in rupture into the peritoneum. On the other hand, supposing that perforation has taken place, it is quite possible that this same treatment — leeches, inunctions, opium, and ice—may be capable, not of preventing suppuration, but of limiting the extension of the serous inflammation, and of restricting it to the immediate vicinity of the appendix.

All depends, then, on the moment when the physician is called to see the patient. If at the onset, and at a moment when it is impossible to pronounce with certainty as to perforation, he ought to act as though he thought it a case of simple parietal appendicitis. His conduct will be the same if the signs of a partial peritonitis manifest themselves, nothing yet warranting the belief that it is a case of perforative appendicitis; experience having shown that this peritonitis may be due to a simple propagation of the

parietal inflammation, and it may be purely fibrino-serous, consequently susceptible of resolution and resorption.

Having passed the seventh or eighth day, the mind of the physician should be made up. He should not allow himself to be deceived by the temporary lull that takes place at this moment, so as to believe in the definitive arrest of an attack of simple fibrinous peritonitis when it is only a case of the limitation of a suppurative peritonitis which tends to circumscribe itself. The medical treatment then becomes useless, save the administration of opium. It is necessary, at all events, to abstain from prescribing any new purgatives, which can but provoke a new extension of the peritoneal inflammation. The time has come to call in the help of the surgeon.

It is understood that these indications have but a relative value. It is as difficult to lay down absolute rules for the treatment as for the diagnosis of appendicitis. The aspect and inspection of the patient often teach more than the most minute descriptions. It is certain that there are cases where, as early as the second or third day, one may resolutely affirm perforation; there are others—more rare, it is true—where even at the end of twelve to fifteen days one would scarcely suspect the true nature of the accidents.

The only absolute rule that can be given is the following: The moment the diagnosis of acute perforative appendicitis with generalized peritonitis is made, or of appendicitis with peri-appendicular suppuration, that moment it is time to abandon all medical treatment and summon the surgeon, and let the responsibility of a laparotomy rest with him.

THE SURGICAL TREATMENT.

Here the question presents itself which is always the most debated and which is likely to be debated for many years to come: At what moment should recourse be had to the bistoury?

We may range in three categories the views taken on this point:

1. The old view, that of the temporizers who take the extreme position that no operation should be attempted until the abscess is ready to burst before your eyes. It has in its support the cases where recovery has taken place after a spontaneous opening and the evacuation of pus, whether outside the abdomen or into the intestine or vagina. But it leaves the patient exposed to all the risks of deep abscesses, to purulent or putrid infection, to general peritonitis by rupture of the abscess into the peritoneal cavity, to purulent infiltration of the subperitoneal tissue and of the muscles, to the propagation of the inflammation to the diaphragm and pleura, to thrombosis of the iliac veins or of branches of the vena portæ, with pulmonary or hepatic embolisms, etc.

2. The extreme view of certain surgeons, who advocate precocious and instant laparotomy as soon as the diagnosis of appendicitis is made. These men support their position by the following arguments: "We never know that an appendicitis will not be perforative; it is better, then, to remove the appendix before perforation has taken place than to run the risks of general or partial peritonitis. Numerous cases have a fatal termination in the first twenty-four to forty-eight hours. Observations are not lacking where an operation too tardily performed has failed to prevent a fatal issue which might have been avoided by an earlier operation. Lastly, an operation, however early performed, is without gravity, and the utility of such operations is being every day proved."

Do these arguments justify systematic surgical interference in the first twenty-four to forty-eight hours? The first argument need not long detain us. We can never, it is true, know that an appendicitis will *not* be perforative, but we are equally in the dark as to whether it *will* be. And, moreover, if we take all the forms of appendicitis as they come, without making any distinction, we know with certainty that in 90 per cent. the disease gets well without the aid of the surgeon, which shows that, as far as the life of the patient is concerned, the immediate prognosis is not so very grave, and that one may safely wait.

Certainly, if one could affirm, from the symptoms presented by the patient, that a case of appendicitis would be perforating in from twenty-four to forty-eight hours, there would

be no warrant for hesitation, and it would be the physician's duty to advise laparotomy immediately, before any sign of peritonitis had manifested itself. But, as before said, a positive diagnosis of this kind is seldom or never possible.

Here is an instance of early operation—the earliest that I have any knowledge of, for it was performed just twenty-four hours after the first symptoms appeared. The case is published by Dr. Dalton, of St. Louis. The patient, a vigorous man, aged 33 years, in the hospital on account of sore eyes, was taken suddenly sick, Dec. 25th, with a violent pain in the abdomen, referred to the umbilicus. Dr. Dalton saw him three hours afterwards, and diagnosticated appendicitis. The next day, just twenty-four hours after the onset of the attack, he operated. The temperature was then 38.8° C., the pulse 116, respiration 32, the pain intense and almost continuous. A semilunar incision three inches long was made over the region of the appendix. The appendix was found running parallel to the cæcum, and adherent to it by a very short mesentery. It was of a dark blue color, almost black, and largely distended—of the size of the little finger. There was not the slightest trace of inflammation between the appendix and the neighboring parts. The appendix was ligated and cut off close to its cæcal origin. On examination it was found not to be perforated at any point; its canal was blocked by a very hard fæcal concretion floating in a purulent liquid. Recovery was rapid.

Would perforation have taken place here if laparotomy had not been performed? From the appearance of the appendix this would seem probable, but only probable; for we do not know that in the simple forms which get well by medical treatment the congestion of the walls of the appendix is not just as intense. But at all events, if we compare the symptoms complained of by the patient with those of simple parietal appendicitis, we find no peculiarity to warrant the belief that perforation was more to be feared than in simple appendicitis. Certainly a fever heat of 38.8° C., a pulse of 120, and an intense and continuous pain in the iliac fossa, are observed at the onset in the most benign forms of appendicitis.

We have, then, we repeat, no means of foreseeing the perforation of the appendix—a prevision which alone would justify an operation in the first twenty-four to forty-eight hours. The position of the partisans of this extreme view would, then, necessitate the opening of the abdomen for every attack of intestinal colic attended with intense pain localized in the right iliac fossa—a rule sufficiently absurd in itself, and which medical men will be very slow to adopt in their practice.

The second argument is that a certain number of subjects succumb as early as the second day of the disease. This number is not as large as one might suppose, for out of 176 fatal cases Fitz could find but 8 in which death took place during the first forty-eight hours. It would seem, moreover, very probable that these cases belonged to the acute form with general peritonitis—a form which is almost certainly fatal and where surgical intervention from the very first would not save the patient. These rapidly progressive cases, being exceptional, ought not to be the basis of a general rule of treatment; in an immense majority of cases the progress of appendicitis is much slower.

As for the third argument, that an operation performed too late is a calamity to the patient and an opprobrium to the surgeon: that is very true, but it does not justify too early an operation. All we can say is, better that it should be early than late.

There remain to be considered the little gravity of the operation, and the good results obtained from early laparotomy. Out of 24 cases thus treated by McBurney—6 on the second day, 14 the third day, 2 the fourth day, 2 at the end of a week—there were 23 recoveries and but one death. I would not think of contesting either the progress of aseptic surgery or the facility and safety with which to-day surgeons open the abdomen. But the fact that an operation is not necessarily serious, does not justify it if it is not necessary; and we would like well to know in how many of McBurney's 24 cases the operation was indispensable to save the life of the patient.

3. We have now to consider an intermedi-

ate position, that of those who believe in an early operation but only when the urgency and gravity of the symptoms furnish indications which the reason and judgment of the physician cannot well misinterpret. No precise time can be fixed for such "early" operation; the limits vary from the third to the fifteenth day. To discuss whether, as a general rule, it is better to operate before the fifth day, which certain American surgeons insist upon, or after the fifth day, as Treves urges, seems to us unprofitable. We say once more, everything depends on the case and on the form of appendicitis. The truth is that the distinction which we have established between the highly acute forms with general peritonitis, and the acute forms with circumscribed peritonitis, should be kept in mind as a guide in deciding whether and when it is best to operate.

In the over-acute forms there is no middle course: either you must operate immediately or leave your patient to die. A diffuse peritonitis caused by intestinal perforation never gets well; to wait is to let your patient become exhausted by the violence of the inflammatory shock, or infected by the putrid products formed in the peritoneum. Besides, it is this over-acute form which kills rapidly —the second, third, or fourth day. It is necessary, then, to make haste if you wish the operation (which is the patient's only chance of life) to succeed. The chances for life offered by laparotomy are not very great; it is probable that they are *nil* after the fifth day. Yet there is certainly some chance if the operation is done in time, if the collapse is not too great nor septicæmia too far advanced. The premature interference of the American surgeons has at least established this fact. You cannot, then, operate too soon when the symptoms leave no doubt as to the existence of a peritonitis general from the start.

In the frankly acute forms with partial peritonitis, with or without tendency to progressive extension, the urgency is not so great. In fact, in the great majority of cases which have been published, the operation was not performed till in the course of the second week. Hence, the rule given by American surgeons, that one ought to operate as early as the third day, if at this moment the patient does not experience a marked amelioration under the influence of abstinence, rest, opium, purgatives, and topical applications, seems to us inadmissible in such cases. We prefer for the acute circumscribed forms Treves' rule: *Not to operate before the fifth day.* But with this reservation understood, it remains to determine what is the most opportune moment to operate.

Now, in our judgment, it is extremely difficult to decide on the fifth day whether or not the partial peritonitis is suppurative, or whether it is due to a perforation of the appendix or to propagation of a parietal inflammation. To lay down a rule that the operation should be performed on the fifth or even the sixth day, is in reality to act as the American surgeons advise and to perform the operation in all cases that present violent or serious symptoms. It is, in fact, risking a laparotomy for a simple partial peritonitis, which might have got well without an abdominal incision.

One might, without doubt, run this risk of an operation in itself needless (though in reality of little gravity) if in cases where the peritonitis is suppurative a delay of several days exposed the patient to mortal dangers. But do these dangers exist on the eighth or ninth days more than the fifth or sixth? We do not hesitate to reply in the negative, the moment that the peritonitis tends to become circumscribed.

We may even add that in such cases it is even an advantage not to act too precipitately. Beside the fact that this relative temporizing enables us to determine with more certainty the diagnosis of suppuration, it favors the limitation of the focus of suppuration, its more complete separation from the peritoneal cavity, and the formation of firmer adhesions to the abdominal wall. Now, the published observations show that the longer the operation is put off the more easily it is performed; in fact, the surgeon has simply a deep abscess to open. You have only to run over the series of facts reported by Roux, of Lausanne, to see that out of 23 cases operated on from the seventh to the fifteenth day there were only 2 deaths—one by embolism, the other by diffuse peritonitis; while out of 12 cases in which the operation was

performed from the second to the sixth day, there were 3 deaths. In 2 of these 12 cases (which recovered) the signs of general peritonitis manifested themselves early and made the necessity of an immediate operation sufficiently apparent.

We are, then, inclined to believe that in the acute frank forms with partial peritonitis the most opportune moment for the operation, unless special and urgent indications should present themselves, is after the first week—from the eighth to the twelfth day, during that period of temporary lull, scarcely marked by any fever heat, which follows the first febrile phase of the malady, and which precedes the fever of purulent resorption. To operate earlier is to run the risk of performing a needless operation, as the peritonitis may be simply fibrinous; or even to run the risk of infecting and inflaming the totality of the peritoneum, the protective limiting adhesions not being sufficiently formed or sufficiently resisting. To wait till a later period is (without possible benefit) to leave the patient to become exhausted and to be exposed to the chances of one of those unforeseen complications which supervene abruptly to aggravate an affection hitherto benign, or indefinitely to prolong its duration.

While this is the general rule as to surgical intervention, it may well be that the progress of the suppurative peritonitis is so rapid that on the fourth or fifth day there is no longer any doubt as to the presence of a purulent collection well limited; in this event one cannot do better than to operate at once and no later than the fifth day, as Treves advises. For a greater reason, if the general symptoms are very threatening, indicating an extreme depression or a well-marked septicæmia, if the peritoneal inflammation gains rapidly instead of tending to become circumscribed, the operation should not be delayed another day; it is, of course, needless to say that with such symptoms the best surgical skill cannot offer much hope.

In the case of children, according to Morton, we should operate earlier than in adult patients, because the progress of the appendicitis in infantile life is more rapid, the tendency to invasion of the peritoneum greater, and the termination more frequently fatal. This is true in the sense that in the infant, as we have said, it is the perforating hyper-acute form, with general peritonitis at the onset, which is most often observed. But it must not be forgotten that we also see in the infant very acute forms which limit themselves to a limited attack of simple peritonitis, and which get well rapidly by purely medical treatment. If, then, the diagnosis of general peritonitis by perforation is not doubtful, resort should be instantly had to laparotomy; but if it is a case of partial peritonitis, the management of the case will be precisely as though the patient were an adult, and the physician will not operate unless he is convinced of the presence of pus.

In the hyper-acute forms, the physician should regulate his line of conduct according to the old axiom: "*Ubi pus, ibi evacua.*" One hardly ever runs the risk of operating too early, as the diagnosis is always tardy. And it is important here to operate the more promptly from the fact that pus tends silently to infiltrate distant parts and to produce in the muscles and neighboring tissues disorders often irreparable.

To sum up: *Theoretically*, surgical interference is indicated as soon as the diagnosis of perforative appendicitis is made. *Practically*, this interference should be immediate in the forms attended with peritonitis which becomes general from the onset; it is the only chance which remains for the patient's life. It ought, in our judgment, to be put off till the eighth or twelfth day in the forms with partial peritonitis, as the diagnosis of suppuration cannot be made certain during the first week, and the chances of recovery seem to us the greater the more thoroughly the purulent collection is encysted.

In the other forms of appendicitis, parietal or complicated with peritonitis by propagation, medical treatment ought alone to be employed—an operation made under pretext of preventing perforation being unjustifiable, considering the enormous proportion of cases which get well without the help of the bistoury.

Paris, France.

AN ESTIMATE OF THE VALUE OF THE PEROXIDE OF HYDROGEN IN THE TREATMENT OF SOME SPECIAL FORMS OF DISEASE AND SURGICAL CASES.*

BY CHARLES H. MERZ, A.M., M.D.

A study of this subject would be incomplete without a passing reference to the history and composition of the substance under consideration. The object of this paper is not to cite all the ailments in which the peroxide may be used, but to indicate more precisely some of the conditions in which it is particularly valuable, deducing these conclusions from a study of its chemical composition and its physiological and germicidal action. To me, there is no remedy at present employed in the treatment of disease that is more wonderful in its antiseptic, disinfectant, and germicidal action than hydrogen peroxide (H_2O_2). It presents to my mind a wider range of applicability than any other known remedy, and in my practice I use it many times daily. I have not found it in any way a toxic remedy, and I believe it to be free from all risk.

If I shall be able to call forth some discussion on this remedy and elicit some facts, after having stated my experience with it, I shall have gained my purpose.

The chemical symbol for hydrogen peroxide is H_2O_2. Its synonyms are: Dioxide of hydrogen, Binoxide of hydrogen, Deut-oxide of hydrogen, and Oxygenated water.

Thenard announced this combination of hydrogen and oxygen some seventy years ago, since which time it has been studied by many chemists.

Upon examination, in a pure undiluted state, we find that hydrogen peroxide exists in the form of a syrupy, unstable substance. It acts upon living animal tissues very much like the actual cautery. It has a specific gravity of one and a-half times that of water.

When violently shaken or brought into contact with certain metallic and some other substances, it quickly decomposes into oxygen and water. When decomposed, a certain given volume yields 475 times its own bulk of free oxygen—and this fact is the basis for all estimates of the strength of a given solution of it. In ordinary use it is diluted to the extent of 96 to 98 per cent.; for instance, a fifteen-volume solution indicates a strength of $\frac{15}{475}$, or a little more than 3-per-cent. strength, and a ten-volume solution a little more than a 2-per-cent. strength. This is equivalent to a pint of a fifteen-volume solution yielding fifteen pints of active oxygen or ozone on decomposition.

It may be interesting to mention the method of its preparation. The process is essentially as follows: Pure oxide of barium is dissolved in distilled water under chemical conditions that cause its decomposition, releasing its oxygen element and enabling it to combine or unite chemically with the elements of the water, forming dioxide or peroxide of hydrogen, water itself being a monoxide of the same element. The union of the water with the oxygen is not chemical, it is not mechanical—perhaps somewhat of both—because the solution can be made to give off its oxygen very easily and in a different manner than other compounds containing oxygen; as, for instance, finely divided platinum, without itself being changed either in weight or character, will dislodge the oxygen.

The oxygen of this solution differs from ordinary oxygen or that which is produced from oxide of manganese, or even from the oxygen in dioxide of barium. The difference in quality is indicated by the terms "active" and "passive." Active oxygen contains ozone; passive oxygen does not. The former colors iodide of potassium blue; the latter does not—although, if a cylinder of passive gas be connected with a small tube containing a sponge soaked in H_2O_2, and the gas allowed to pass through it, the passive gas at once becomes active. The difference is of importance, as ozone has greater and higher oxidizing qualities than oxygen, and when the latter possesses on ozonic quality it is even of more value than pure ozone—the latter being so harsh as to be almost valueless.

It has been demonstrated that oxygen produced at high temperatures is passive, or non-ozonic, while that produced at low temperatures is active, or ozonic, which is essentially the quality of H_2O_2.

*A paper read before the Mississippi Valley Medical Association, at Cincinnati, O.

Impurities in H_2O_2 cause chemical changes in the solution which, owing to the extreme sensitiveness of the product, give varying and misleading results which are confusing to the practitioner. I lay a good deal of stress upon this fact, because I know of many physicians who have dropped its use entirely on this account.

The therapeutic value of peroxide or hydrogen is due entirely to the oxygen of the solution. No matter what the application, it is always the oxygen which acts. Destruction of germ life; transformation of poisonous excrements, ptomaines, etc.; allayment of inflammation; action on the nerves; stopping improper fermentation; such peculiar action as the immediate relief produced when applied to burns (not as an anodyne); coagulation of albuminoids; as a stimulant; the application in asphyxia; relaxation of muscular contraction; and, in fact, no matter what the application, when there is action it is always the oxygen which acts. This field is so large, the uses so varied, and the results apparently so different, that it is hard to say that it is all the same action, the same chemical transformation; and yet, as a practical fact, it is only "oxidation."

The action in every form of application, as before stated, is due to oxygen. The internal application has been greatly neglected; partly because heretofore the solutions of H_2O_2 have been of such a character that they could hardly be used and, when used, no undisturbed action of oxygen could be had because of the acids and impurities with which it was allied.

It can positively be stated that oxygen when pure is harmless. I have never heard of a case where direct injury could be traced to it. And further, oxygen when it contains an ozonic quality is a wonderful agent in the hands of a practitioner, because it is a purely natural remedy derived from the life-supporting air we breathe and in the only form in which it can be introduced artificially into the body, unaccompanied and uncombined with other chemical bodies which may or may not, according to the case, be harmful. Germ life cannot exist *without* oxygen, but it would seem that those forms of germ life which are inimical to human life *cannot exist in the presence of* ozonic oxygen, or H_2O_2.

Many attempts have been made to introduce oxygen artificially into the blood, but so far unsuccessfully. It seems that the blood will take up so much and no more. Experiments made upon animals in atmospheres of pure oxygen show that they absorb little if any more oxygen than when in pure air. But in atmospheres of pure oxygen, life can be sustained longer in a given quantity than in a like quantity of pure air—due to the oxidation of the poisonous exhalations from the pores as well as from the lungs. Experiments made, however, show that the blood will absorb oxygen through the tissues when it is introduced in H_2O_2 form into the stomach; and in this way, no doubt, it acts on diseases which at first glance would not appear to be susceptible to its influence.

As I have said previously, this hydrogen peroxide is to me a never-ceasing source of interest and wonder. I believe it to be the best antiseptic known—not excepting the bichloride of mercury.

After the discovery of peroxide of hydrogen in 1818, the use of the remedy seems to have been neglected, and it is only within the last twenty years that bacteriologists have called attention to its valuable germicidal properties.

Dr. Miguel places peroxide of hydrogen at the head of the list of antiseptics. Prof. Nocart testifies to its potency in destroying microbes. Dr. E. R. Squibb reports satisfactory results in treating infectious diseases. I might mention endorsements without number, but this is perhaps unnecessary.

In view of such endorsements, it is, in my opinion, to-day neglected as being one of the most powerful destroyers of pathogenic microbes. I beg to quote a few lines from a report by Dr. B. W. Richardson, who has done much to popularize this remedy: "When pus is placed for observation under the microscope, mixed with the neutral peroxide solution, the phenomena are the most interesting. The pus corpuscles are for a time driven about as if they were alive; they move in all directions, assume ovoid shapes as they squeeze through masses that may obstruct their course, and, after many variations of form and movement, come to a standstill like amorphous matter—dead, so to speak, and entirely disorganized."

This action of the peroxide in following and destroying the pus-cells has led me to call it the "ferret." Several years ago, while delivering a course of lectures in Wooster Medical College, at Cleveland, O., I made this substance an object of special study—more particularly as to its effects on living and dead tissue as viewed from the pathologist's standpoint. I believe it would follow a sinus ten feet long if the sinus contained pus. There is absolutely no escape for the pus-cell under its disorganizing, destructive action. It acts both chemically and mechanically upon all excretions and secretions.

It is undoubtedly a ready and abundant source of free and active oxygen.

So far as its toxicity is concerned, my experience agrees with that of all other observers, the effects of large quantities being absolutely harmless. Even in the diseases of children I have used it freely and repeatedly and have had no ill results whatever.

The therapeutic value of oxygen in whatever form it is administered must be attributed to its influence on cell activity; all agents that increase the normal function of the cell increase the resistance of the organism to disease This is shown by the oxidation that takes place when the peroxide is brought into contact with unhealthy tissues —normal tissues remaining unaffected

Before mentioning some of its applications, I desire to call attention to a preparation of the peroxide that is make by the Oakland Chemical Company, of New York. I have found it far superior to any preparation heretofore offered to the profession. I mention this particular preparation without desiring in the least to advance the commercial interests of any particular firm of manufacturers.

I might truthfully say that I have found a new use for the peroxide every day. I keep a supply of it constantly on hand.

When we recognize the toxicity of mercuric bichloride and carbolic acid, we are prepared to appreciate the value of oxygen in any of its forms as an antiseptic.

The spores of the *anthrax* bacillus resist our most poisonous agents (hydrochloric, boric, and salicylic acids). Oxygenated water alone, as shown by Paul Bert and Rignaud, possesses the power of destroying them.

For the benefit of those to whom this remedy may be comparatively new, even though it has grown into popular favor so rapidly, I would suggest a few ideas as to its applicability—all of them having been gained by actual experience with the compound.

I repeat the statement that no progressive physician or surgeon can afford to be without a supply of it. A good preparation once tried will never be abandoned. I have been in the habit of using it in different proportions in combination with glycerin and water—equal parts, half strength, and pure. In my office I have ready for use at all times a mixture of peroxide, glycerin, and water, equal parts.

When I find a threatened abscess, I inject at several points near the seat of swelling an equal-part mixture of peroxide and glycerin. I usually insert a gold needle deep into the tissues, and I find that the severity of the inflammation is always modified. If suppuration has advanced to a stage where incision is necessary, I make the incision, and at once wash out the cavity with the same solution uutil no foam appears at the opening. In addition, I keep the incision constantly moist with the same solution.

I find that, in conjunction with a suitable diet and chalybeate tonics, inhalations of the peroxide are most valuable. We daily see cases of anæmia and chlorosis that will not respond to chalybeates in any form. I have seen these same cases under the use of peroxide show an increased appetite and digestion and an improvement in all the symptoms In several cases I have had it administered by enema and sponge bathing —besides giving it internally in half-teaspoonful doses, largely diluted, night and morning.

It has proven particularly effective in cases of chronic diarrhœa, such as is found in soldiers of the late war, where ulceration and copious discharge of pus are prominent symptoms. The same may be said of *fistula in ano*, where I have repeatedly seen radical cures follow its cleansing and stimulating action. Its peculiar power in ferreting out pus will explain its utility in these cases. I am in the habit of inserting pledgets of cot-

ton soaked in a solution of the peroxide—allowing them to remain *in situ* from four to six hours.

In *aphthæ* there can be no better preparation suggested. The mouth should be rinsed carefully with a weak solution, and the patches touched with a stronger solution.

Applied to the bites and stings of insects, it gives certain and speedy relief. I have in mind a number of cases of very extensive and painful inflammation due to poison-ivy. For all such cases I use nothing but a strong solution of peroxide, glycerin, and water. This is kept in contact with the inflamed surface constantly until all swelling and inflammation are reduced and the itching is allayed. In many cases after all the usual remedies have failed, the peroxide has given prompt relief.

No more effective dressing can be found for recent burns. For the raw and bleeding surface and the foul suppurating surface it is equally effective.

The same may be said of chancres. I do not advise it as in any way supplanting the use of mercury, which is always indicated; but for the purpose of cleansing and disinfecting, the peroxide is invaluable.

It is in carbuncle that I have had the most surprising results. Under former plans of treatment sloughing was always extensive and repair very slow. I now inject, with a glass hypodermic syringe, each opening in succession. The characteristic foam will appear at all the other openings. This procedure is continued until the peroxide returns clear. If an incision be found necessary, I make a very small but deep one, and wash out all foci until no foaming occurs. The contiguous parts are well cleansed, and a pad moistened with the peroxide solution is kept constantly applied. In consequence I have far less sloughing to contend with, in many cases none, and the results have been indeed surprising. Several patients who have suffered in a like manner before could scarcely believe after this treatment that they had been suffering from a carbuncle a second time, the cure was so speedy and painless. Formerly I had employed the multiple puncture advocated by Volkmann, but have of late employed only the peroxide.

In fact, in all forms of phlegmon I now use the peroxide in preference to any other form of antiseptic. Where formerly I had great difficulty in following pus along the palmar tendons and fasciæ, often being compelled to make numerous incisions for drainage, I now trust to the peroxide to make its own way and at the same time insure thorough cleanliness.

After incision for necrosed bone I rely upon the peroxide to cleanse the surfaces of the incision and the cavity, to penetrate every crevice and sinus, disintegrating and oxidizing all dead tissue in an absolutely certain manner. A corrosive sublimate solution cannot accomplish this; by its very action on the albuminous discharges it forms an impenetrable covering which prevents the solution from coming into contact with the tissues to be acted upon.

For preventing septicæmia and pyæmia in the treatment of suppurating wounds and sinuses in which dependent drainage cannot be secured, or in which irrigation is impracticable, it is the most useful—in fact, the *only* really useful—disinfectant and germicide.

I have observed numerous cases of infantile eczema that have yielded to the peroxide treatment very readily. In conjunction with alkaline remedies exhibited internally, I believe it much superior to any oily application. In some cases it may be well to cleanse the parts with tar soap before applying the peroxide.

Used in diphtheria it will give remarkable results. I have repeatedly seen the membranes soften and separate under its use. I use it in the form of a spray, applying it to the throat freely every half-hour or hour. I have, however, used it only topically, employing the usual constitutional treatment. In my practice it has quite supplanted the use of the ethereal solution of iodoform. Unfortunately, it cannot be relied upon in cases of diphtheria to combat symptoms of exhaustion and collapse; these symptoms must be met by other remedies.

It may be used with great advantage in all forms of catarrh of the upper air-passages. It cleanses the parts as no other substance will.

I have found it a remedy of great value in that affection so annoying to ladies and chil-

dren—*herpes labialis*. Indeed, it is the only application I have found that will abort the eruption or prevent its spread when once established. I usually apply it in full strength to the threatened eruption.

In ophthalmia I find the use of a weak solution followed by the most satisfactory results. The same may be said of otorrhœa. The solution in the latter case I never use with a syringe, but allow it to flow into the ear, drying the canal afterwards with a little absorbent cotton.

For all wounds, whether recent or old, I have found it one of the safest and most effective antiseptics. The wound under treatment may be sprayed or washed freely with a mixture composed of equal parts of chemically pure peroxide and glycerin, and the same applied as a dressing on lint or cotton, covering all with oil-silk.

Its cost has deterred me from using it as a general antiseptic in the sick-room, but I believe that in every form of infectious disease its use would be invaluable.

I hold it in such high esteem because it is, to a certain extent, a natural product. It may be found in rain-water caught during thunder-showers and in the vicinity of pine forests. It is Nature's own disinfectant.

The oxidizing power of ozone is well known. It is intense. It oxidizes all the metals except gold and platinum. Nearly all organic substances are oxidized by it at once, thus proving it a powerful disinfecting agent.

A very minute proportion of ozone exists in normal atmospheric air, but it is particularly abundant after a thunder-shower. It is a noticeable fact that it is seldom found in thickly inhabited localities.

I have used the peroxide of hydrogen continuously for two years, but was for some time disappointed in its use. After having secured a solution of standard strength and one not liable to decomposition, my faith has been greatly strengthened. This very considerable experience with the compound has made me enthusiastic concerning its wonderful qualities, and, as stated before, I find myself extending its application every day.

I have suggested only a few of the many conditions in which it will be found of value. It is absolutely inoffensive in the human body, and it destroys almost instantly all morbific germs.

Wherever a safe, reliable, and powerful antiseptic is required, I would urge the trial of this substance. The most important obstacle heretofore in the way of its more extended use has been the difficulty of obtaining a watery solution of reliable strength and one that is capable of maintaining that strength after it has been obtained. This obstacle, as stated, has been perfectly overcome.

The irritating properties of this chemical compound, when properly diluted, are scarcely more than those of pure water; but the results following its use are indeed brilliant.

Sandusky Ohio.

DISEASES OF THE FALLOPIAN TUBES AND THEIR TREATMENT.

BY THOMAS MOORE MADDEN, M.D., F.R.C.S.ED.

The accurate differential diagnosis and successful or radical treatment of fallopian-tube diseases have only become generally obtainable within a recent period, and for that advance we are largely indebted to the teaching and practice of Lawson Tait and some other leaders of the modern school of abdominal surgery. Nevertheless, it may not be superfluous to remind you of the somewhat ignored fact that the disorders of the uterine appendages were by no means unfamiliar to many of the older writers, by whom—and more especially by Astruc,* of Paris, in 1761, and by Kruger,† of Göttingen, in 1781—their pathology was fully discussed; whilst by others very remarkable instances of what we now term pyo-salpinx and hydro-salpinx, as well as other tubal troubles, have been narrated. Thus Portal‡ quotes, *inter alia*, a case from De Haen of "abscess in the left fallopian tube, which contained eighteen pints of pus," and another from Munieks of "an enormous fallopian cystic tumor, the

*Astruc, "Traite des Maladies des Femmes," Paris, 1761.

†Kruger, "Pathologia Ovariorum Muliebrum," Göttingen, 1782.

‡Portal, "Cours de Anatomie Médicale," tome v, p. 540.

contents of which were estimated at upwards of a hundred gallons." He also cites from Harden the instance of "a woman in one of whose fallopian tubes was found encysted one hundred and forty pounds of an aqueous fluid." These or other cases of fallopian disease were also referred to by Bailey,* Hooper,† and other writers of the first two decades of this century, and, above all, a little later, by Dr. Daves,‡ by whom the symptoms and pathology of diseases of the oviducts as then understood were distinctly described in 1835. From that time may be dated the general recognition of the fact that the fallopian tubes, being so intimately connected as they are, structurally and functionally, with the uterus, must necessarily therefore be liable to inflammatory diseases similar to those that affect that organ, however modified these may be in their symptoms and consequence by the special organization and relations of the oviducts.

The diseases which may be thus transmitted to the fallopian tube, not only from its uterine orifice, but also through its free peritoneal extremity, or which may originate within its structure, are, firstly, inflammation, or salpingitis, and its consequences—viz., pyo- and hydro-salpinx,—of which probably the most common causes are gonorrhœal infection and puerperal sepsis. Beside these, the oviduct may be the seat of encysted, fibro-muscular, and malignant tumors.

Acute Salpingitis.—Acute inflammation of the fallopian tubes may be here very briefly disposed of, inasmuch as salpingitis is seldom brought under gynæcological notice until the disease has reached the chronic stage. It is most frequently observed attending the puerperal state as a complication or consequence of septicæmia, when its occurrence is indicated by deep-seated, throbbing pain, extending from the iliac region into the groins and thighs, together with local tumefaction and tenderness, recognizable by conjoint, recto-abdominal, or bimanual examination over the course of the broad ligaments, in which the tortuous outlines of the hyperæmic and enlarged oviducts may be thus detected. The most common result of acute salpingitis is the chronic form of the disease. It may, however, also terminate in resolution or cure, as well as in the occlusion or obliteration of the ducts in any part of their course by the cohesion of their walls from plastic inflammatory exudations. As to the treatment of such cases, I know of nothing very reliable that can be recommended beyond allaying pain by opiates and administering quinine in combination with iodide of potassium or bichloride of mercury. Hot water vaginal and rectal irrigation, and external stupes, are obviously indicated, and are most likely to prove successful in acute catarrhal salpingitis, whilst it is difficult to see what possible benefit can be produced by counter-irritation by blisters or strong mercurial ointment over the inguinal region. This counter-irritation, though still occasionally employed in such cases, is more likely to add to the discomfort of the patient than to cure the disease.

Chronic salpingitis may affect either one or both tubes; more generally both are implicated, although in different degrees. Its extrinsic causes may be either gonorrhœal, puerperal, or catarrhal, whilst occasionally it may arise from local causes, such as tubercular and cancerous deposits in the tubes. Moreover, as might be expected, salpingitis and its consequences are more frequently met with during the earlier period of marital life, and in those in whom the utero-ovarian or sexual functions have been most exercised, than in patients more advanced in years and of non-erotic temperament. Thus Dr. Bland Sutton, who in his pathological investigations has had an extensive opportunity of examining the bodies of a large number of women of ill fame, in most of these instances discovered evidences of hydro- or pyo-salpinx, or in some cases found one or both fallopian tubes represented by an impervious cord and the ovaries atrophied and unrecognizable. This induces him to believe that the frequency of tubal disease between the ages of 20 and 35 years and its relative rarity about the fortieth year, is to be accounted for by the fact that, if the individual survive the dangers incident to an inflamed and distended tube, the diseased parts atrophy.

* Bailey, "Diseases of the Uterus," etc.

† Hooper, "Morbid Anatomy of the Human Uterus."

‡ Daves, "Obstetric Medicine and Diseases of Womb," vol. ii, 1835.

Symptoms of Chronic Salpingitis.—The general symptoms of chronic salpingitis, before the disease has eventuated in pyo- or hydro-salpinx, are scarcely distinguishable from those of the generally coexisting oöphoritis; and, later on, its effects and evidences are symptomatically almost identical with those of pelvic cellulitis or perimetritis, and in former days were commonly confounded with that disease. Of these symptoms of chronic tubal disease the most important are the recurrence of attacks of menorrhagia, otherwise unaccounted for and generally unrelievable by ordinary treatment, which are attended with dysmenorrhœa or impeded through protracted or excessive menstruation. In such cases the patient further complains of a characteristic deep-seated intra-pelvic pain, which—in some instances from the first, and in almost all cases during the progress of the disease—sooner or later becomes acute or lancinating, shooting out into the sacral and inguinal regions, and extending down the thighs. At the same time may be also noted evidences of constitutional febrile disturbance and pyogenic rigors, and in some cases intramenstrual hæmorrhages or aqueous discharges from the uterus, together with local tumefaction and tenderness in the course of the oviduct, discóverable on examination per rectum.

The pathology of pyo- and hydro-salpinx has recently been fully investigated by a distinguished pathologist, Dr. Bland Sutton, and I cannot do better in this connection than place before you the following abstract of his observations on this subject, which may be found *in extenso* in The Lancet of December 6th, last year:

Pyo-salpinx.—In severe cases of salpingitis, after occlusion of the abdominal ostium, accompanied, as is usual, with stricture of the uterine end of the tube, the pus is as securely locked up in the tube as it would be in a deep-seated abscess, and it follows the course of an abscess. The walls of the tube, stretched by the accumulating pus, gradually thin, and the inflamed tube becomes adherent to surrounding structures—ovary, uterus, rectum, intestine, or broad ligament. The wall of the tube continues to thin until, on some slight exertion, it bursts. If the pus be discharged into the peritoneal cavity, it establishes rapidly fatal infective peritonitis. Right pyo-salpinx is very prone to open into the rectum. When a pyo-salpinx lies in contact with bowel, the pus it contains becomes abominably fetid, due to osmosis of the intestinal gases. The relation of pyo-salpinx to the rectum must be studied in connection with tubo-ovarian abscess.

The first effect of salpingitis upon the ovary is to cause thickening of its capsule, and if lymph is effused upon its surface this may organize and extensive peri-oöphoritic adhesions result. The effects of this thickening of the capsule are twofold. At first it prevents the rupture of ripe ovarian follicles, and the tension gives rise to considerable disturbance and causes pain; and, as the enlarged follicles cannot discharge their contents, it naturally follows that on section an ovary which has long been the seat of peri-oöphoritis will be found largely converted into cystic spaces, and two or more may become confluent and form a cyst the size of a walnut. As such a cyst enlarges and makes its way by absorption to the surface, it not infrequently comes into relation with and adheres to the dilated pus-containing ampulla of the corresponding tube, which has been brought in contact with it through the restraining influence of the tubo-ovarian ligament. Not infrequently absorption takes place, and the dilated ampulla of the tube will communicate with an enlarged follicle or cyst in the ovary, and thus give rise to the tubo-ovarian abscess, which may be discharged by way of the uterus at irregular intervals.

When the infective qualities of pus are not great, a pyo-salpinx gives rise to few symptoms. It is this form of pyo-salpinx that, becoming gradually dilated with fluid, is eventually converted into a hydro-salpinx, which, as a rule, may be regarded as merely a late stage of pyo-salpinx. Many milder attacks, however, may be described as "catarrh of the tube," and, like a nasal or gastric catarrh, subside and leave no trace. If the inflammation is sufficiently intense to seal the ostium, permanent danger results, and if, as is so commonly the case, both tubes are affected, they remain throughout life functionless and often a source of grave danger. In cases of salpingitis sufficiently

severe to occlude the ostium, the tube is, after the subsidence of the inflammation, in the condition of a blocked ureter; there is no escape for the fluid which is excreted by the glands in its walls, or for the fluid which passively exudes into its cavity. It consequently forms a cyst by retention. The fluid is colorless or greenish, owing to the presence of cholesterin.

In some instances the fluid, as before stated, may escape at irregular intervals through the uterus, constituting what has been described as "hydrops tubæ profluosis," and which is accounted for by Dr. Sutton as resulting from the occurrence of fallopian fistula in such cases. In other instances, again, the exudation may take place through the abdominal ostium of the tube, possibly giving rise to fatal peritonitis, or in non-septic cases to "hydro-peritoneum," which has been defined by Dr. Alban Doran as a collection of fluid in the peritoneal cavity that cannot be referred to any tangible organic disease except chronic salpingitis of a mild type with an unobstructed tube.

Before referring to the treatment of these conditions, I shall in the first place briefly recapitulate the excellent notes taken by my clinical resident, Mr. G. Whyte, of a case of chronic salpingitis, which may serve to exemplify the ordinary course and results of that disease:

A. O'N——, aged 24, unmarried, anæmic-looking; draper's assistant; admitted Oct. 17th, suffering from menorrhagia of two years' duration. The changes, she stated, lasted from six to eight days, and were accompanied by much suffering. She also complained of almost continual pain in left groin, and backache, together with a bearing-down sensation. On vaginal examination the position of the uterus proved normal, and nothing beyond some slight endocervicitis and an unusual flattening of the roof of the vaginal posterior cul-de-sac was apparent. An examination by the rectum was made, on which distinct fullness and fluctuation were discovered in the fallopian tube, which was much enlarged. The aspirator was employed, and a long needle was passed through the vaginal cul-de-sac and guided by finger *in situ* to most prominent part of tumefaction, at which it was introduced; and, on turning the tap, about six ounces of turbid puro-serous fluid was evacuated. No subsequent dressing was employed: the vagina and uterus were both daily irrigated with hot water. She was put on iodide of potassium and dark mixture. Rapidly convalesced, and was discharged on Dec. 9th.

Treatment.—In the treatment of chronic salpingitis and the resulting pyo- or hydro-salpinx, it appears to be not infrequently lost sight of that in these, as in all other cases, the gynæcologist should set before him not only the removal of disease, but also the restoration of the functional and structural integrity of the affected organ, so far as these objects can possibly be combined and accomplished; and that only where the latter is impracticable should he be content with the former. With this view, several methods of dealing with the cases now under consideration have been suggested, viz.: *First*, the removal, by aspiration, of the contents of the distended tube, whether purulent or serous, as recommended by Dr. Routh, as well as some years ago by myself in several papers read before meetings of the Royal Academy of Medicine in Ireland, the Brighton meeting of the British Medical Association, and at the Washington meeting of the International Medical Congress, in which I also discussed the expediency and showed the possibility of catheterization of the fallopian tubes in certain exceptional instances. *Secondly*, by free incision per vaginam, and subsequent washing out of the emptied tubes, as advocated by Dr. Sinclair. *Thirdly*, curetting the endometrium around the uterine ostium of the tube, and Emmet's operation. *Fourthly*, employment of electricity by the method of Apostoli. *Fifthly*, by what may be termed conservative laparotomy, *i. e.*, abdominal section with the view either of aspiration of the distended ducts, or, as advocated by Dr. Alban Doran in some instances, for the purpose of breaking down adhesions and "freeing the diseased appendages." *Sixthly*, may be here mentioned the resection of the tube by salpingotomy, or Skutsche's operation. *Seventhly* and lastly, in this connection, is massage as employed by Brandt in such cases.

I shall not here waste time by an extensive reference to any of these procedures, save

those that I have myself proved the practical utility of. This is not the case with regard to salpingotomy, concerning which, as well as other "fancy operations" that may more safely be demonstrated on a lecturer's diagrams than in a patient's body, I would re-echo Dr. Goodell's criticism: "The diseased parts cannot be handled in abdominal section without great risk. The tube is often tensely distended, and adhesions to neighboring structures are usually intimate. Hence the tube may carefully be ruptured, intestines torn, and circumscribed collections of pus diffused." As to massage, even if harmless, it would be objectionable for general reasons mentioned on a previous occasion. But in cases such as those under consideration, the negative merit of harmlessness can hardly, I think, be attached to a procedure like that by which, according to the writer just cited, one of its advocates (Brandt) is credited with venturing to attempt the emptying of a distended tube into the uterus by "rolling it gently between the fingers of both hands"—a manœuvre which, it is admitted, often causes an escape of secretion into the peritoneal cavity, which readily gives rise to symptoms of peritonitis.

Turning from these fond fancies of transcendental scientists or enthusiastic faddists to the sober realities of practical gynæcology, we may now consider the rational treatment of pyo- and hydro-salpinx, in regard to which there appears to me no reason to depart from the traditionally recognized first principles of surgery by an indiscrimate resort, in the first instance at least, to such heroic operative measures as the complete extirpation of the uterine appendages. If the mammary gland, for example, becomes the seat of a purulent collection, or if, as Sir Spencer Wells suggests, the tunica vaginalis testis is the location of a hydrocele, would it not be more advisable to open the abscess or to tap the hydrocele than to amputate the breast or to remove the affected testicle? And must we then necessarily adopt an entirely different course as a matter of general practice in dealing with analogous conditions in other no less important organs?

Acting on these principles, therefore, for several years past, I have, in the first instance at least, treated a considerable number of cases of pyo- and hydro-salpinx by aspiration and other conservative measures. The successful results thus obtainable in many, though by no means in all, instances of this kind, have been proved in my wards in the Mater Misericordiæ Hospital. The majority of cases of this kind were there treated by the method which I am about to describe, before its advantages were fully recognized. This treatment, even if not as certain in its radical curative results as salpingotomy, is certainly quite as successful in that class of cases to which its employment should be restricted, and at least contrasts favorably in facility of performance and safety from danger with the latter operation, which, in other cases or after the failure of the more conservative measures, may become no less expedient. Hence I shall venture for an instant to dwell on details of the less serious method, which, as I believe, will in not a few instances be found to afford satisfactory results whenever tubal collections are accessible per vaginam.

In the first place, to permit the necessary manipulation, the patient should be put under some anæsthetic and placed in the ordinary left lateral gynæcological position. Then the operator introduces the index and middle fingers of his left hand through the sphincter ani upwards and forwards along the outlines of the posterior wall, the fundus being pressed down by his assistant's hand over the hypogastrium. In this way the tubes and ovaries can be readily palpated, and if there be any inflammatory or cystic enlargement of the former it may be distinctly recognized as a tortuous, elongated, or sausage-shaped or rounded fluctuating tumor, extending, as Dr. Wm. Duncan says, "from the side of the uterus outwards to the broad ligament and backwards into Douglas' fossa." Having thus ascertained the position of the pyo- or hydro salpinx, the next step is to carefully introduce, per vaginam, on the point of the index finger, a long fine needle affixed to the aspirator, up to the roof of the posterior vaginal cul-de-sac, through which it is to be passed into the retro-vaginal fossa, and thence (guided by the operator's left index from the rectum) up to the most prominent presenting part of the tubal swelling, into which it is to be plunged.

The tap of the aspirator is then to be turned, so as to give exit to the contents of the dilated tube, the expulsion of which may be assisted by the steady pressure of the assistant's hand from about the hypogastrium down into the pelvic cavity, and continued until the tube is perfectly evacuated. After this the vagina should be rendered aseptic by insufflation with iodoform, and then no further local treatment beyond hot water irrigation will generally be required, unless the tube should, as sometimes happens, again fill, though probably to a lesser extent, when the same procedure may be again and again, if necessary, repeated until the oviduct has become reduced to its normal size.

Curetting Fundal Orifice of Tubes; Treatment by Electricity.—Apart from malignant and other degenerative changes, the most common immediate cause of cystic accumulations in cases of chronic salpingitis is mechanical obstruction of the uterine orifice of the oviduct, due either to chronic follicular endometritis, flexion, or, in some instances, supra-involution of the uterus. Under such circumstances the tubal obstruction is most likely to be relieved by dilatation followed by curetting of the diseased proliferating endometrium in the first instance, by the rectification of the flexion in the second, and by faradization in the last named cases. The faradic current has, moreover, not only in these, but also in other forms of chronic salpingo-oöphoritis, been in some instances successfully employed by Dr. Apostoli, of Paris, who generally employs in such cases the faradic current of tension applied in moderate doses and for only a few minutes at a time, for which he claims the most remarkable curative results. Another recent authority on this subject—Dr. Milne Edwards, of Edinburgh—does not believe, however, that the galvanic current is suited to cases where there is definite organic change in the ovaries, but considers that here faradism may possibly be of service.

Removal of Uterine Appendages.—In those graver (and, as I hope may yet be found by others of higher authority than myself, somewhat more exceptional than is generally supposed) cases in which, from the extent of fallopian disease, the implication in its course of adjoining structures, the urgency of the symptoms attending its progress, or other causes, it becomes impossible to proceed satisfactorily or safely by the methods already referred to, and in which more active surgical intervention is obviously indicated, there then only remains for our adoption the complete removal of the uterine appendages.

That operation has, however, now come into vogue under other circumstances than these, being supported by a large number of modern gynæcologists as not only the most efficient, but also, in the cases in which it is required, the safest, method of dealing with the tubal diseases referred to, and hence the procedure which should be generally adopted in such cases. This doctrine I cannot unreservedly accept, believing, as I do, that in some instances the results of salpingitis are curable without any active treatment, and that in other cases they are amenable to the minor measures I have described. Nevertheless, in this hospital and elsewhere I have met with cases in which the only apparent alternatives were either the speedy death of the patient from fallopian-tube disease or else the complete removal of the affected appendages by what is generally known as "Tait's operation," after the name of the distinguished surgeon by whom it was introduced and has been most successfully carried out in this country. As the ovaries and tubes are both essential factors in the menstrual function, it follows that, when the latter are removed, with salpingotomy should also be combined oöphorectomy, to obviate the possible consequences of an abortive or abnormally accomplished process of ovulation. Nearly all the preliminary successive steps of "Tait's operation" being identical with those of ovariotomy, I shall merely allude to those points in which these operations may be contrasted. The first and most obvious of these is the smaller size of the abdominal wound required for removal of the appendages. This incision should only be just sufficient to allow the introduction of the first two fingers of the operator's left hand, which should be passed down to the fundus uteri, by the position of which he will be readily guided to the contiguous tubes and to the ovaries. In such cases the often widely distended oviduct must be most ten-

derly handled to avoid extravasation into the peritoneal cavity of a pyo- or hydro-salpinx, which may occasionally be prevented by aspiration of the diseased tube before any attempt to draw it out through the abdominal wound, which must be the next step in this operation when not rendered impossible by extensive inflammatory adhesions. Having thus drawn out, as far as can be safely done, the affected tube and ovary, so as to form a kind of pedicle from the broad ligament, a blunt-pointed needle carrying a double ligature of stout silk is to be passed through the centre of the latter (carefully avoiding injury to blood-vessels as far as possible in so doing). This ligature may be next secured by an ordinary "reef knot," which I have found sufficiently reliable and easier to make than it would be for me to acquire the probably still better "Staffordshire" knot, the use of which has been described by Dr. Macnaughton Jones: "A loop of double ligature is passed through the centre of the broad ligament, avoiding the vessels. The loop is then turned back so as to include both the ovary and tubes in the two loops thus formed. One free end is then passed through the returned loop; both ends are now drawn together and then cut off." Whatever ligature be employed, it should secure the pedicle, from which the ovary and oviduct are next to be separated (by a blunt scissors curved on the flat) a little above the point of ligation, which may be then dropped back into the peritoneal cavity. A similar procedure may then be adopted with regard to the remaining ovary and tube, after which the abdominal cavity may be washed out with warm water, the wound closed, and the case treated on the same general principles as an ordinary ovariotomy.

The operation, although under ordinary circumstances feasible enough to any surgeon, is occasionally one that might puzzle the most dextrous specialist to carry into effect. The difficulty of removing a fallopian tube that may possibly be distended to the point of bursting by a pyo-salpinx, without risk in doing so of rupturing the thin, tensely-stretched walls of the purulent sac into the peritoneal cavity, is obvious. But where, moreover, as occasionally happens in such cases, the ovaries and tubes are matted together and to the ligaments, uterus, and other adjoining structures in one inextricable mass by inflammatory exudations and adhesions, that difficulty becomes almost, if not quite, insuperable. I have had occasion to remove the uterine appendages in several cases, and, as I believe, have generally obtained results neither better nor worse than the average of other ordinary gynæcologists. But at the same time I think it not improbable that such other practitioners as well as myself may have sometimes regretted either that they had not operated earlier or that they operated at all in those exceptionally unpromising cases to which I have just referred.

The immediately successful results now obtained from the removal of the uterine appendages in the majority of cases, and the very small mortality consequent on its performance in suitable cases, in the hands of skilled specialists, has been proved beyond any possibility of question by the statistics of Mr. Tait's vast series of cases, as well as by those of Dr. Bantock and many other eminent surgeons. Of the ultimate curative results of the removal of the uterine adnexa, however, a less hopeful view is taken by some authorities whose opinions on this subject are no less entitled to consideration. Thus Mr. Alban Doran observes: "As a rule, oöphorectomy for chronic disease of the appendages is followed by speedy convalescence. Unfortunately, a permanent cure is not so frequent. Mental symptoms occasionally follow double oöphorectomy. The cases where the stump suppurates are particularly unsatisfactory. Fistulous tracts open, close, and reopen, in the abdminal wound for months, discharging thin pus. Such cases find their way to the consulting-rooms of others, or to other hospitals than the institution where the operation was performed. The operator hears no more of them, and he or the hospital registrar records them in perfect good faith as 'cures.' A larger minority suffer from a continuance of the pains which preceded the operation, probably on account of intestinal adhesions or through irremovable inflammatory products which press on nerves. The ligatures certainly set up trouble in some cases."

Somewhat similar views have been previously expressed by other writers. Thus Dr. H. C. Coe, in the "Proceedings of the New York Academy of Medicine," observed: "There are not a few women now attending the various clinics in New York who have had their ovaries and tubes removed, and yet who complain of precisely the same pain as before; in fact, I can recall cases in which, although the menstrual disturbance is wanting, the pain is more severe than it was before."

I therefore think that, without in any way questioning the necessity of these operations in many instances, or the success and small mortality which have attended their performance in the hands of a few distinguished surgeons, the great body of medical practitioners who occasionally must meet and deal with cases of fallopian-tube disease should be very slow to adopt operations the success of which can only be assured by exceptional skill; and that even where the circumstances of the case preclude the possibility of transferring the responsibility to those possessing that capacity, they should, before attempting to imitate their practice, at least fairly and fully try the less heroic yet often successful methods of treatment to which I have already alluded. I have recently had clinical reason to know that the repetition of this recommendation is not superfluous at the present time, having in this hospital within the past couple of sessions met the effect of its disregard.

I fully recognize the fact that the first duty of the surgeon is to save his patient's life; and when this can only be done by immediate removal of the uterine appendages, the operation should be at once resorted to. But under any other circumstances it should never be lost sight of that the uterine appendages are as essential to reproductive capacity in women as are the testes in men, and that by their complete removal the patient is practically unsexed or incapacitated for the chief function and primary object of woman's married life. Nor does it seem to me ever justifiable to perform such operations without the patient's full concurrence and knowledge of the consequences—a rule the propriety of which is obvious, and which is now generally recognized and acted on. At the same time, however, it appears to me that the removal of the ovaries and fallopian tubes is even yet occasionally somewhat too readily resorted to in non-organic disease as a possible means of benefiting neurotic and hysterical symptoms. It may, therefore, be well to repeat that other operations and methods of treatment have ere this been for a time as generally accepted, and then, having perhaps been carried beyond their judicious application, having fallen into desuetude. We have, therefore, no guarantee in the present frequency of resort to the removal of the uterine appendages that the same may not in the course of time happen also with regard to these operations, which, unquestionably valuable and successful as they have proved in the hands of some eminent surgeons in cases of absolute necessity, should, in my humble judgment, never be lightly regarded as measures of election.

The question of election or necessity I regard as the cardinal point to be decided in considering the expediency of removing the uterine adnexa in the treatment of fallopian-tube disease. In many instances, unquestionably, as I have already said, that course becomes an unavoidable necessity, and is then the obvious duty of the surgeon. It should never be forgotten, however, that in probably a no less large number of cases tubal diseases may also be successfully treated by some of the much less heroic remedial and conservative measures to which I have referred.

Dublin, Ireland.

IMMUNITY AGAINST TYPHOID.

Bruschettini, from observations made during a typhoid epidemic in November, 1891, reports: Cultures of Eberth's bacillus were obtained by withdrawing a little blood from the spleen of a patient, and inoculating rabbits therewith. The results as to immunity proved: (1) That it is possible to obtain complete immunity; (2) to obtain such a result, it is necessary to employ about 20 c.c. of heated blood culture, or 50 c.c. of old broth or gelatin cultures, given subcutaneously; (3) the serum of such immunized animals has very great antitoxic and bactericidal powers in typhoid fever.

Correspondence.

ALVARENGA PRIZE OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.

The College of Physicians of Philadelphia announces that the next award of the Alvarenga Prize, being the income for one year of the bequest of the late Señor Alvarenga, and amounting to about $180, will be made on July 14, 1893, provided that an essay deemed by the Committee of Award to be worthy of the prize shall have been offered.

Essays intended for competition may be upon any subject in Medicine, but cannot have been published, and must be received by the Secretary of the College on or before May 1, 1893.

Each essay must be sent without signature, but must be plainly marked with a motto and be accompanied by a sealed envelope having on its outside the motto of the paper and within it the name and address of the author.

It is a condition of competition that the successful essay or a copy of it shall remain in possession of the College; other essays will be returned, upon application, within three months after the award.

The Alvarenga Prize for 1892 has been awarded to Dr. R. H. L. Bibb, of Saltillo, Mexico, for his essay entitled "Observations on the Nature of Leprosy."

CHARLES W. DULLES,
Secretary.

"ROTATORES."*

There was a young maid on a bicycle;
She looked as cold as an icicle;
She cut quite a dash
'Till the wheel made a splash
And left the poor maid in a nice pickle.

On a wheel there was a young dandy;
On another a maid quite handy;
The maid she got huffy
Because he took Duffy,
Port, Sherry, and Cognac brandy.

MORAL.

Young man, if you're boozy don't try
A bicycle ride on the sly.
For you can't be too sure
Of the Keeley gold-cure
When you take too much bourbon and rye.

G. A. WILLIAMS, M.D.

Bay City, Mich., Nov. 4, 1892.

*Dr. Williams, who has voiced his sentiments on cycling in THE AGE in prose, now resorts to verse, in the hope, we assume, to entertain its readers with the poetic diathesis.—ED.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

B. W. PALMER, A. M., M. D., Editor.

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Editorial.

THE OPERATIVE TREATMENT OF APPENDICITIS.

The paper of Talamon in this number of THE MEDICAL AGE ably presents the arguments against haste in the operative treatment of appendicitis. He classifies the cases which require surgical interference under the head of perforative appendicitis; while the non-surgical cases, or such as will get well with purely medical treatment, are non-perforative, and any peri-appendicitis or exudation which may attend them is of a benignant kind, not leading to suppuration and general peritonitis. In other words, you may have an inflamed, swollen appendix, with considerable sero-fibrinous effusion and a little local peritonitis, without perforation, and all may end in resolution in a few days. Such cases, Talamon says, constitute the majority of the cases of appendicitis which come under the observation of the physician. They are, in fact, all degrees of appendicitis *that come short of perforation and suppuration.*

The perforative cases, he says, constitute only a small fraction (20 per cent.), and not even all of these necessarily demand an early laparotomy, for nature always attempts to circumscribe the suppurative inflammation —to wall off the escaped fæcal products and the pus from the general abdominal cavity; and the physician who waits, and trusts to medical measures, will often find after the lapse of ten days or more that all the surgery that is required is to open a deep abscess, a perceptible pointing indicating where the incision should be made.

This is probably a tolerably accurate expression of the facts of the case. The statistics of Guttmann and Fowler agree in this,

that about eighty per cent. of cases of appendicitis get well under medical treatment. These, however, are hospital statistics and include many very mild cases—simple appendicular colic—which the ordinary physician, seeing them in his private practice, would be very likely to fail to diagnosticate, for the reason that they got well so soon. We think that we come very near the actual facts when we affirm that of cases of appendicitis properly diagnosticated and presenting real gravity, occurring in the private practice of physicians, and left to purely medical treatment with here and there a late operation, *fully fifty per cent. are fatal.* This opinion we have formed as a result of personal experience.

It may be that the disease is more frequent and more fatal in this country than elsewhere. Certainly, in no other part of the world are physicians so anxious, so earnest, to reduce the rate of mortality. We know of physicians whose experience in the medical or expectant treatment of appendicitis has been almost uniformly disastrous. Naturally, after seeing patient after patient die on whom all the ordinary medical measures were tried, they have come to welcome the aid and the hope which surgery offers; and after unfavorable experience with the late operations, they have become impressed with the importance of an early laparotomy, before perforation has taken place and before a spreading peritonitis has set in.

The mortality of the early operation has not yet been definitely established. McBurney has reported twenty-four cases with only one death; this is certainly a good showing, for these twenty-four cases were apparently doomed. In the cases reported by Dr. John Homans and Dr. Alfred Worcester, recovery was the rule, death the exception. The same may be said of Dr. Stimson's cases, those reported by Dr. G. R. Fowler of Brooklyn, Dr. W. W. Keen, Dr. Nicholas Senn, Dr. C. B. Porter, and others in this country. These are some of the "American surgeons" to whom Talamon has referred, with somewhat of reproach, as being in favor of an early operation. We think the results of their laparotomies for appendicitis have in nearly every instance justified the early intervention, and that it may be laid down as a general rule that whenever such surgeons as those whose names we have mentioned—J. Collins Warren, Maurice Richardson, John Homans, McBurney, Wier, Stimson, Abbe, Senn, Keen, etc.—perform a laparotomy for appendicitis, and the patient dies, the fault is not that the operation was performed too soon, but too late. We believe that the prevailing sentiment in the medical profession of to-day is in favor of an early operation.

Perhaps no better rules for deciding as to the operative or non-operative character of a case have been given than those suggested by Dr. Joseph Price: "Do not operate on the first day—usually—because the number of mild cases is undoubtedly large. One operator (McBurney) saw thirteen cases in one year too mild for an operation. If nausea disappears in twelve hours; if tenderness on pressure is not increased in twelve hours; if temperature is normal, or not above 100° F. in the mouth; if pulse is normal, or but little accelerated; if patient moves in bed with ease; recovery without operation is probable."

Dr. W. W. Keen, of Philadelphia,* formulates the general rule that by the second, certainly by the third, day, and *a fortiori* later, the operation should be done if the following indications are present: (1) If there is abdominal pain, most marked in the right iliac fossa, and especially with tenderness at McBurney's point, attended possibly with nausea and vomiting; (2) if there is rigidity of the right abdominal wall; (3) if there is fever up to 100°, 101°, or 102° F., which does not yield to medical treatment; (4) if, by minute and careful palpation, tumefaction and increased resistance can be discovered, with possible dullness and, rarely, fluctuation; and (5) if there is œdema of the abdominal wall, pus will generally be found. . . . If pus is present, the abscess cavity is to be evacuated and washed out with great care, lest its frail wall be broken down and general peritonitis ensue. If there be no pus, the appendix should be sought; and if this is swollen, thickened, and distended, the seat of a concretion, or otherwise abnormal,

* Annals of Surgery, St. Louis (quoted in Saunders' Annual, 1892).

even without perforation, it should be tied and cut off, and the stump either be simply disinfected or inverted and covered by a few Lembert stitches through the outer layers of the cæcum. The brilliant results which have been reported by Senn, Treves, McBurney, Stimson, Bernardy, Baldy, and others, in cases in which no pus was present but the appendix was perilously diseased, have abundantly shown that such an appendix is a menace to life compared with which the dangers of an aseptic operation are nothing. Moreover, he would be decidedly in favor of an operation, even if there were only present iliac pain, tenderness at McBurney's point, rigidity of the abdominal wall, moderate fever, and increased resistance without tumefaction and dullness, nausea and vomiting.

"The unusually large personal experience of Fitz shows that five-eighths of all cases, and one fourth of the cases which had been treated medically alone, should have been operated on. With so large an experience from so careful and accomplished an observer, it is a crime for us to go on allowing case after case to die that ought to have been relieved by surgical interference.†"

PRELIMINARY ANNOUNCEMENT OF THE FIRST PAN-AMERICAN MEDICAL CONGRESS.

This announcement clearly indicates that those in charge of organizing this fraternal meeting have not been idle in their work for its practical consummation.

The progress made is evidenced by the information already obtained and condensed in this report, and is auspicious of its realization on a most satisfactory and successful basis.

Dr. Charles A. L. Reed, Chairman of the Committee on Permanent Organization and Secretary-General of the Congress, in his report on what has already been achieved, states:

A series of regulations has been adopted, and an organization in accordance therewith has been effected, in some degree, in all of the constituent countries except Paraguay. In several countries the organization has been completed in accordance with the regulations, while in some instances full lists of secretaries have been secured; in others, honorary chairmen only have been furnished, while in still others the organization has not advanced beyond the appointment of a member of the International Executive Committee. The lists of officers are, however, sufficiently complete to furnish channels through which the necessary preliminary correspondence of the Sections may be inaugurated. In view of this, and the additional fact that a considerable time is necessary for the interchange of letters with some of the remoter countries, the Committee deems it expedient to submit for promulgation this preliminary announcement of the Congress.

The Committee entertains the hope that the organization may be completed in each of the constituent countries, in accordance with the regulations, before the meeting of the Congress.

What is wanted now to promote its further interests is that the medical profession of this country awaken to the important objects to be accomplished by this great Congress, which can be achieved only by every doctor putting his shoulder to the wheel.

Every physician who wants to lend a helping hand should realize that the heavy expense of organization, aggregating about $5,000, must be met out of advance registration fees. The registration fee is $10 for each member residing in the United States, but no fee is charged to foreign members. Each registered member will receive a card of membership and be furnished a set of the Transactions. The address of the Treasurer, Dr. A. M. Owen, is Evansville, Indiana, and no reader of THE AGE can evince his interest more happily and helpfully than by sending this amount to the Treasurer at the present time.

Those who wish full information concerning what has already been done toward organization, and what is prospected, should write Dr. Reed for the announcement which has excited our remarks.

Drink deep of the Pierian spring of enthusiasm, and use your influence for creating enough ardor and zeal among your medical friends to have them send their registration fee.

† Dr. J. W. White.

AMERICAN PUBLIC HEALTH ASSOCIATION.

The twentieth annual meeting of this international association of the United States, Canada, and Mexico will be held in the Salón de la Cámara de Deputados, City of Mexico, Mexico, Nov. 29th and 30th and Dec. 1st and 2d.

Dr. Irving A. Watson, Concord, New Hampshire, the efficient Secretary, has issued a very complete announcement of all that would interest those intending to be present, which may be obtained from him.

English and Spanish will be the official languages at this meeting; both will be equally recognized. Papers will be read and discussions take place in both languages. All discussions will be stenographically reported for the use of the Association.

The indications are that a large number of persons from the United States and Canada will attend the forthcoming meeting. Such an opportunity—to attend an international meeting of this Association, to visit a country picturesque, charming, quaint, and fascinating in many particulars, to enjoy the magnificent scenery of one of the longest continuous railway trips in the world—has never before been offered the members of this Association, and many will avail themselves of it. Delegates from all the States in the Republic of Mexico will also be present.

All communications relating to local matters should be addressed to Dr. Eduardo Licéaga, Chairman Local Committee of Arrangements, Mexico, Mex.

The meetings of the Association are open to the public. All persons, of whatever profession or occupation, interested in the work of the Association, are cordially invited to be present.

The official routes from the South, East, and West, by rail and by steamer, baggage regulations, Pullman car rates, and all desired information, will be afforded by the Secretary.

No more important public question than that of public health can engage the attention of sanitarians and physicians, and such a body should do much by interesting the public in promoting the interests of the proposed plan to have a cabinet officer in the National Cabinet to represent this preeminently worthy effort for the public welfare.

The American Public Health Association was organized in 1872, by a few public-spirited men who foresaw the need of bringing together in one body the ablest sanitarians in the country, for the purpose of inaugurating measures for the restriction and prevention of contagious and infectious diseases, and for the diffusion of sanitary knowledge among the people.

The growth of the Association and the work it has accomplished more than justify its existence. Its membership has been augmented from year to year until it now constitutes the largest and strongest sanitary body in the world, and embraces in territorial extent the United States, the Dominion of Canada, and the Republic of Mexico.

Under the impetus given by its work, State and local boards of health and sanitary associations have been organized, sanitary publications increased, and hygienic knowledge widely and extensively diffused. The Association has already published seventeen large and valuable volumes, increasing at the rate of one a year, and containing the papers, reports, and discussions presented at the annual meetings. These volumes constitute in themselves a library upon sanitation; they are elegantly printed and bound and are alone worth more to any person interested in hygiene than the cost of membership. Each member is entitled to the annual volume, delivered free of expense. In addition thereto, the Association has published a standard work upon "Disinfection and Disinfectants," beside the Lomb Prize Essays, now so widely known to the American public.

Among its members may be found physicians, lawyers, ministers, civil and sanitary engineers, health officers, teachers, plumbers, merchants, etc.; in fact, every profession and many of the industries are represented in its list of members. The only qualifications required for membership are a good moral character, an interest in hygiene, and an endorsement by two members of the Association. Cost of membership, five dollars a year.

INVESTIGATION OF THE ACTION OF CHLOROFORM.

The following note, addressed to the profession in America, is self-explanatory. The importance of the work undertaken by Dr. Hobart A. Hare is sufficient justification for the request he makes, and there is no doubt the response will be prompt and creditable to the enterprise and scientific accuracy of the American physician and surgeon:

"Having been asked to undertake a research at the expense of the Government of His Highness the Nyzam of Hyderabad, India, with the object of reconciling the conflicting views concerning the action of chloroform, I am anxious to receive from American physicians and surgeons records of cases where it was noticed that the heart stopped beating *before* respiration, or respiration stopped *before* the heart.

"Notes concerning any such cases will be considered strictly confidential, provided the reporter states his desire that his name shall not be mentioned in the report of the research when it is finished. Otherwise due credit will be given for any information received.

"Address communications to Dr. H. A. Hare, 222 South Fifteenth St., Philadelphia, Pa."

THE INDULGENCE OF WOMEN IN STIMULANTS.

In England they have undertaken a crusade to remedy the drinking habits of women. The London medical journals and their readers have taken up the discussion from the professional standpoint.

As illustrative of the views held, the British Medical Journal suggests that trial be made of treating them as diseased individuals, in a hospital instead of in a prison.

Dr. Lawson Tait believes that an intelligent and educated woman never becomes a drunkard but from deep-rooted and often carefully concealed cause. Among their physical sufferings that predispose are mental distress, the climacteric period, chronic inflammatory disease of the appendages, etc. He draws the moral that the physical condition of every habitual drunken woman should be carefully determined.

Ordinarily the craving for stimulants, where it exists, is not for the article by which drunkenness can be secured, but for intoxication itself.

The causes of inebriety being both physical and mental, the combination of medicines with hygienic measures, intellectual, moral, and elevating influences, with absorbing occupation, largely muscular, are all called for.

COCA ERYTHROXYLON.

"Our Variecha first his coca sent,
Endow'd with leaves of wondrous nourishment,
Whose juice suck'd in and to the stomach ta'en,
Long hunger and long labor can sustain:
From which our faint and weary bodies find
More succor, more they cheer the drooping mind,
Than can your Bacchus and your Ceres join'd.
Three leaves supply for six days' march afford;
The Quitoita with this provision stor'd
Can pass the vast and cloudy Andes o'er."

—COWLEY.

Few drugs have as interesting and remarkable a history as *Coca erythroxylon*. As a source of cocaine alone it deserves a conspicuous niche in the herbarium temple of fame.

The coca leaf is the great source of comfort and enjoyment to the Peruvian Indian; it is to him what betel is to the Hindu, kava to the South Sea Islander, and tobacco to the rest of mankind; but its use produces invigorating effects which are not possessed by the other stimulants. From the most ancient times the Peruvians have used this beloved leaf, and they still look upon it with a feeling of superstitious veneration. In the time of the Incas it was sacrificed to the sun, the *Huillac Umu* or high-priest chewing the leaf during the ceremony; and before the arrival of the Spaniards it was used in Mexico instead of money.

Coca leaves have secured the general recognition in therapeutics which those familiar with their properties have always indicated. Physicians have become convinced by personal observation that the marvelous effects attributed to the drug are only what might naturally be expected from the action of so powerful an alkaloid as that contained in the coca leaves.

The cordial of coca presents the drug in a palatable form, commending it especially to the large class of patients of delicate nervous

organization. In its preparation the astringent and bitter constituents of the drug, which would exert only a disturbing influence, are rejected, while care is taken to retain unchanged the true active principle.

The specific uses of such a preparation will suggest themselves at once to the physician. There are few cases of neurasthenia in which it will not be found useful. Taken after dinner, it serves often to facilitate digestion, and even confirmed dyspeptics find their distressing symptoms relieved by it. It is of especial value in those cases where exhausting mental labor has led to morbid depression of spirits. There is no remedy like it for a fit of the "blues." It relieves the nervous irritability that follows indulgence in excesses of any kind, restoring the capacity for work and giving renewed energy. It thus acts as a sort of antidote to the effect of opium, alcohol, tobacco, or coffee, and judiciously used may even enable one to overcome the morbid craving for any of these stimulants when they have been used to excess.

It is said that public speakers and singers have found themselves in better voice after using coca.

As a remedy for nausea and vomiting from reflex causes, particularly the vomiting of pregnancy, the cordial proves extremely efficacious. For this purpose it should be taken a few minutes before eating, and the dose repeated in an hour or two afterwards. Gastralgia is frequently relieved by this remedy, and nervous headaches often disappear under its use.

It is of service also in cases of asthma, as an aphrodisiac, emmenagogue, antiperiodic, in overcoming drunkenness, in nervous exhaustion, and internally and locally for hæmorrhoids. As a restorative of the circulation in cases of enfeebled heart it is invaluable.

The experience of physicians has shown that the cordial may be given in doses of a dessertspoonful to a tablespoonful, repeated as required.

We believe Messrs. Parke, Davis & Co. were the first to introduce to physicians of this country this interesting drug, and have made a thorough study of its eligible and therapeutically efficient administration.

Notes and News.

Zola on Amputation at the Shoulder-Joint.—

M. Zola, in his novel "The Downfall," gives a dramatic description of a surgical operation: "The business that lay before him now was the resection of the shoulder-joint in accordance with Lisfranc's method, which surgeons never fail to speak of as a very pretty operation, something neat and expeditious, barely occupying 40 seconds in performance. The patient was subjected to the influence of chloroform, while an assistant grasped the shoulder with both hands, the fingers under the armpit, the thumbs on top. Bouroche, seizing the long, keen knife, said: 'Raise him!' seized the deltoid with his left hand and with a swift movement of the right cut through the flesh of the arm and severed the muscle; then, with a deft rearward cut, he disarticulated the joint at a single stroke, and presto! the arm fell on the table, taken off in three motions. The assistant slipped his thumbs over the brachial artery in such a manner as to close it. 'Let him down!' Bouroche could not restrain a pleased look as he proceeded to secure the artery, for he had done it in 35 seconds. All that was left to do now was to bring a flap of skin down over the wound and stitch it, in appearance something like a flat epaulette. It was not only 'pretty,' but exciting, on account of the danger, for a man will pump all the blood out of his body in two minutes through the brachial, to say nothing of the risk there is in bringing a patient to a sitting posture when under the influence of anæsthetics."—*Medical Record.*

Remedies for Defective Color-Vision.—

A committee of the Royal Society appointed to consider the question of testing for defective color-vision has made a report recommending that a schedule be made of employments in the mercantile marine and on railways, the filling of which by persons whose vision is defective, or who are ignorant of the names of colors, would involve danger to life and property; that the testing should be compulsory, and intrusted to examiners certificated by the central authority; that Holmgren's test be used for color-vision.

and that after passing it the candidate be required to name without hesitation the colors that are employed as signals or lights, and also white light; that rejected candidates have a right of appeal; that candidates rejected for naming colors wrongly who are proved to possess normal color-vision be allowed to be re-examined after a proper interval of time; that certificates of the qualifications of candidates be given, and schedules of the results of examinations be sent up every year; that persons filling the scheduled employments be examined every third year for form-vision; that the tests, etc., be inspected periodically; that signal colors of ships and railways be as far as possible uniform; and that witnesses in judicial inquiries arising out of these matters be themselves tested for color- and form-vision.—*Boston Medical and Surgical Journal*, Oct. 13, 1892.

The Action of Alcohol and Its Value in Disease.—

The American Medical Temperance Association, through the kindness of J. H. Kellogg, M.D., of Battle Creek, Mich., offers the following prizes:

1st. One hundred dollars for the best essay "On the Physical Action of Alcohol, based on Original Research and Experiment."

2d. One hundred dollars for the best essay "On the Non-Alcoholic Treatment of Diseases."

These essays must be sent to the secretary of the committee, Dr. Crothers, Hartford, Conn., on or before May 1, 1893. They should be type-written, with the author's name in a sealed envelope, with motto to distinguish it. The report of the committee will be announced at the annual meeting at Milwaukee, Wis., in June, 1893, and the successful essays read.

These essays will be the property of the Association and will be published at the discretion of the committee. All essays are to be scientific, without restrictions as to length, and limited to physicians of this country.

Address all inquiries to T. D. Crothers, M.D., Secretary of the Committee, Hartford, Conn.—*University Medical Magazine*, November, 1892.

Eleventh International Congress.—

The Eleventh International Congress will meet in Rome, Italy, from September 24 to October 1, 1893. By an official letter dated August 22, 1892, and signed by Prof. Guido Baccelli, President, and Prof. E. Maragliano, Secretary-General, Dr. A. Jacobi of New York has been directed to form an American subcommittee. Its membership is not yet complete, but on it are already found, beside that of the chairman, the names of Drs. Wm. Osler, of Baltimore; S. C. Busey, of Washington; N. S. Davis, of Chicago; Charles A. L. Reed, of Cincinnati; Wm. Pepper, of Philadelphia; F. Peyre Porcher, of Charleston; James Stewart, of Montreal; and Alexander J. C. Skene, of Brooklyn, N. Y. In the interest of facilitating the trip to Italy, and reducing the expense, arrangements will be made with the steamship companies. According to a communication from the Central Committee, contained in a letter of the Secretary-General's dated Sept. 14th, the North German Lloyd proposes to reduce the fare to Genoa by 20 per cent. and that of the return trip by 10 per cent. It is expected that still more favorable terms will be secured.—*Journal of the American Medical Association.*

The Diagnosis of Cholera.—

Laser (Deutsche Medicin. Wochenschr., No. 32, p. 793) recommends the following diagnostic procedure for the recognition of the stools of a patient suspected to be suffering from an attack of cholera. A number of tubes of peptone-bouillon or peptone-gelatin are inoculated with the stools of the suspected case, and a like number of tubes are inoculated with the stools of a presumably healthy person. Placed in the thermostat, in the course of twenty-four hours the tubes inoculated with the cholera stool present a characteristic odor absent from the others. Care must be taken not to use too much fæcal matter, as the odor of this may obscure the odor developed. If also a film has formed, and if in the course of forty-eight hours a reddish color can be produced by the addition of sulphuric acid, the diagnosis is absolute.—*Philadelphia Medical News*, Sept. 17, 1892.

A Substitute for Senn's Plates.—

Dr. von Baracz has made experiments with plates cut from various vegetables to replace the decalcified bone plates of Senn. He finally found that Swedish turnips were best adapted for this purpose. They are prepared in the following manner: A thin slice, about one-half centimetre thick, is cut from a fresh turnip, and then from two to four oval plates are cut from the middle of this. An opening is made in the centre of each plate, the diameter of which is made to conform to the diameter of the bowel. To harden them the plates are kept for four days in a 1-per-cent. carbolic acid solution. The degree of firmness of the plates can be determined by drawing a linen thread through the edge. Experiments on dogs showed that the plates were completely digested in fifteen days. In an anastomotic operation for cancer of the pylorus the author employed the plates with perfect success.—*Centralbl. f. Chirurgie* (*International Journal of Surgery*).

Dr. Gibier's Pasteur Institute.—

The corner stone of the New York Bacteriological Institute, which Dr. Paul Gibier of the Pasteur Institute is now building at Ninety seventh street and Central Park, was laid October 4th with appropriate services. The building will be 25x95 feet, five stories and basement, and will cost $65,000. The private portion of the institute will be divided into two departments—a general medical and surgical division, and a division for the treatment of special diseases. Dr. Gibier said that patients suffering from nervous diseases, as well as those bitten by mad animals, will be admitted to the institute, where a new method of cure following the general Pasteur treatment will be tried. The free treatment of persons suffering from rabies will be continued in the new institute, although it is from the treatment of private patients that Dr. Gibier hopes to defray the expenses of the bacteriological department.—*New York Medical Times*, November, 1892.

An Alliance of Quacks.—

The bone-setters of France have formed a defensive alliance with the magnetic healers, mediums, *masseurs*, and others of that class, their object being to organize a national league "to protect and advance their professional interests." In a recent manifesto complaint is made that there is a tendency towards an "undue and unauthorized legislative interference," and a claim is made that it is the inalienable right of all men to heal themselves or get treatment wherever and from whomsoever they may elect. They therefore propose to make themselves felt in the elections; the specious cry of "fair play" will be put into active use early and late, and it will not be surprising to learn that they secure a semblance of legality.—*Journal of the American Medical Association.*

Proposed Higher Medical Degree in France.—

The French Minister of Public Instruction has, it is stated, submitted to the Council of the Faculties of the Universities of France a proposal for the establishment of a medical degree superior to the ordinary M.D., carrying with it the style and title of "Docteur ès Sciences Médicales" (Doctor of Medical Science). The utility of the proposed new degree is not apparent; but the mere fact that such a proposal has been seriously made in a country like France, where the titles question has no real existence, will serve to show what may be expected on this side of the Channel when we are all full-blown Doctors of Medicine.—*British Medical Journal.*

Fifth Quarterly Meeting of the Northern Ohio District Medical Society.—

This will be held at Elyria, O., Thursday, December 1, 1892. The officers are: President, Dr. Wm. Caldwell, Fremont; First Vice-President, Dr. T. M. Cook, Sandusky; Second Vice-President, Dr. J. H. Calvin, Huron; Secretary and Treasurer, Dr. C. H. Merz, Sandusky. Executive Committee—Drs. Caldwell, Cook, Calvin, and Merz. Committee on Admissions—Dr. N. C. Scott, Cleveland; Dr. M. Stamm, Fremont; Dr. J. H. Calvin, Huron. Sessions will be held in the Court House. Headquarters, the Beebe House.

Another New Medical Journal for Chicago.—

The Chicago Clinical Review, edited by Dr. George Henry Cleveland and Dr. Albert I. Bouffleur, has sprung full-grown from this prolific producer of new enterprises.

Therapeutic Brevities.

Vibration as a Remedial Agent.—Charcot (Progr. Méd., August 27, 1892) calls attention to the good results which attend the employment of vibration in cases of paralysis agitans. After giving a history of the subject, in which reference was made to the work of Vigouroux, Boudet, and Mortimer Granville, Charcot said he had long noticed the good effect that railway journeys and carriage drives had on persons suffering from paralysis agitans. He has accordingly subjected some patients to treatment by vibration by placing them in an arm chair to which are imparted rapid oscillatory movements by means of a special mechanism set in motion by electricity. Amelioration is generally felt after the fifth or sixth sitting. The painful phenomena are chiefly influenced; the shaking becomes less, the stiffness seems to disappear; they walk better and sleep quietly and well. Gilles de la Tourette, assuming that the good results are due to diffusion of the vibrations over the whole cranium to the brain, constructed a helmet, the sheets of which exactly encased the head of the subject, and which was surmounted by a plate on which was placed a little motor. Insomnia not due to organic brain disease, migraine, and neurasthenia were greatly benefited by this method of application. Charcot, who has also tried it with good effect in a melancholic patient, considers it a powerful sedative to the nervous system.—*British Medical Journal*, Oct. 1, 1892.

The Treatment of Tetanus.—In the Therapeutic Gazette of February, March, and April Dr. Braden Kyle gives the results of a series of experiments made on the pathology and treatment of tetanus, in which he concludes that the bacillus of tetanus is an obligate anaërobe, and that its virulence is actually diminished when the organism is deprived of oxygen; that the bacillus grows best at a temperature of 98° F., but that it will grow rapidly when the temperature is as low as 51°. Pure cultures when inoculated induced fatal results in less that 50 per cent. of the cases, and from inoculated animals that died Dr. Kyle was unable to produce tetanus in other animals. In some cases the bacillus was found at the point of inoculation. He considers that the organism is polymorphous; that it is extremely resistant to the action of heat, corrosive sublimate, peroxide of hydrogen, and carbolic acid, but that it is extremely sensitive to hydrochlorate of cocaine and to the fumes of bromine. He concludes that the treatment of cases of tetanus may be summed up as follows: "(1) Disinfection of the nidus of development of the bacilli; (2) the elimination of the poisonous products of the bacilli from the system; (3) drugs which are sedatives to the nervous system; (4) excision of the cicatrix."

Cocaine Cantharidinate.—Hennig (Berliner Klin. Woch., August 29, 1892) describes this preparation. It is more correctly termed a mixture than a chemical combination, but this is immaterial from the therapeutic point of view. It is a white powder, readily soluble in hot water. The author introduced it on account of the painlessness with which it may be injected. Swelling and infiltration at the site of injection occur much less frequently, and are less marked, than with the other cantharidinates. Once only out of 2,845 injections did an abscess form. There was never any irritation of the bowels, and very rarely of the kidneys. Like the other cantharidinates, it not only acts beneficially in chronic catarrhal processes of the nose and throat, but also in early tuberculosis of the upper air-passages. It gave good results in tuberculosis of the lungs, skin, bones, and glands. In some of the cases injections of ½ dcmgr. sufficed. It is contra-indicated in advanced tuberculosis, as well as in albuminuria. If no improvement follow ten injections, the treatment should be given up and a further attempt made in six weeks' time.

The Treatment of Female Inebriates in New York.—A law was passed by the New York Legislature at the close of last session giving judges power to commit women who are confirmed drunkards, or who are addicted to the excessive use of any narcotic drug, to St. Saviour's Sanitarium, a new institution which was lately founded for the purpose. The committal may be for one year, with further extensions if necessary. The Episcopal Sisterhood of St. Mary has undertaken to manage the institution, which is situated in the northern part of New York, on Inwood Heights, overlooking the Hudson River and the surrounding country. The institution is designed especially for women of the wealthier classes. In the case of women of superior education and culture, however, who are victims to inebriety, want of means will not constitute a bar to their admission.

Saprol: A New Disinfectant.—Laser (Centralbl. f. Bakt., August 18, 1892) gives an account of an inquiry made by him into the properties of saprol. This is a dark brown, oily substance, which lies upon the surface of fluids to which it is added, and these extract from it its disinfecting constituents—phenol, creasol, and other products of coal-tar which are soluble in water. Urine and fæces impregnated with micro-organisms—st. pyogenes, bacilli of cholera and typhoid, etc.—can be effectually sterilized by saprol in the proportion of 1 per cent., and it is likely to prove of value in the disinfection of the dejecta and of fluids on a large scale, as in the case of barracks, prisons, and schools. Its price is about 6d. per litre. Sewage treated with saprol is said to retain its manurial value.—*British Medical Journal.*

Atropine in Cholera.—A. Koroltchük (Vratch, No. 34, 1892, p. 867) argues that the most characteristic symptoms of cholera closely resemble those induced by muscarine, or ptomaines or toxins of the muscarine group. In view of the well known fact that atropine is a powerful antidote agent in muscarine poisoning, he suggests that the algid stage of cholera should be treated by hypodermatic injections of atropine. In an editorial note V. A. Manasseïn points out: (1) That belladonna has already been tried in cholera, without any particular result; and (2) that in any case atropine must be used very cautiously, since otherwise after the subsidence of algid manifestations, and after the return of the patient's circulation and absorption to the standard point, toxic symptoms may develop.—*British Medical Journal.*

The Treatment of Acute Tonsillitis.—Dr. Ch. Eloy, believing that acute tonsillitis is of microbian origin, contagious and as well infectious, strongly insists upon disinfection of the mouth, destruction of enlarged tonsils by ignipuncture to close the avenues of infection, and the segregation of those predisposed to this disease. Isolation, then, is social prophylaxis. He practices internal antisepsis by salol, salicylates, naphthol, to prevent infection, or, if it have already occurred, to combat it. The diet is regulated, tonics and antipyretics are ordered, not only to modify the symptoms but as well to place the organism in the best possible condition of defense against the invading microbes.—*Revue Gén. de Clin. et de Thér.* (*American Journal of the Medical Sciences*).

Antiseptic Oxygenation in Typhoid Fever.—Dr. B. W. Richardson, in The Asclepiad, recommends bichloride of methylene for internal use as being antiseptic, slightly stimulant, antispasmodic, and anodyne. The dose is from 5 to 30 minims. In particular he recommends it in typhoid fever, combined with peroxide of hydrogen, as follows:

℞ Methyleni bichloridi, ℥j.
Sol. hydrogen peroxid. (10 vols.), ℥j.
Acid. hydrochloric. dil., ♏xxx.
Aq. destil., ad ℥vj.

M. Sig.: One-half ounce q. 3 h., in half a tumbler of water.

This he calls antiseptic oxygenation.—*Medical Record.*

Trional and Tetronal.—Dr. Ramoni has tried trional and tetronal in fifty-one insane men in the Roman Lunatic Asylum, and in some female patients in the S. Giovanni Hospital. The following are his conclusions: (1) The two new hypnotics are superior to sulphonal and chloral; (2) the patient awakes more easily, and there are no unpleasant after-effects, such as nausea, vomiting, loss of appetite, etc.; (3) the action of the drugs is rapid (30 to 60 minutes); (4) trional is superior to tetronal, the sleep induced by the former being sounder and more lasting; (5) the sleep (after either of the drugs) lasts on the average six to eight hours, and is not disturbed by dreams.—*Riforma Medica.*

Removal of Mother-Marks.—The Allgemeine Medicinal Central Zeitung gives the following as very efficacious: Mix one part of tartrate of antimony with four parts of emplastrum saponatum, and work into a paste. Apply the mixture over the mark to be removed to the depth of one line (one-twelfth inch), and cover with a slip of gummed paper or court-plaster. On the fourth or fifth day suppuration sets in, and in a few days later scarcely a sign of the mark can be seen.

Vaginismus.—The following is recommended by De Sinéty as affording relief in obstinate cases of vaginismus:

℞ Thymol, gr. iij.
Ext. belladonnæ, gr. xij.
Potassii bromidi, ʒ ss.
Ol. theobromæ, ʒ iv.

M. et ft. suppositoria No. iv. Sig.: One suppository, as needed.

—*Medical Record.*

Medical Progress.

NOTES ON CASES OF POISONING, WITH DESCRIPTION OF AN EMERGENCY AND ANTIDOTE CASE.—John S. McLain, M.D., of Washington, D. C., contributes to the Virginia Medical Monthly a report of six cases of poisoning, including poisoning from acute alcoholism, arsenic, atropia sulphate (two cases), chloral hydrate, and laudanum. In addition to the detailed report of these cases, he writes:

In the opening lines of Dr. William Murrell's valuable little work, "What to Do in Cases of Poisoning," he says: "If you have neglected to provide yourself with one (an antidote case or bag), lose as little time as possible in doing so."

I had neglected to do this very thing up to about a year ago, when I obtained from Messrs. Parke, Davis & Co. their important addition to the physician's armamentary, an "Emergency Case," and the value and assistance it has been to me during the last twelve months leads me to think that a description of the little box and its contents, for the benefit of those who may never have seen it, and a history of the following cases (lives, some of which were, I think, saved by the timely presence of the above-mentioned case), may be of some interest to the profession at large.

The Emergency and Antidote Case consists of a neat, handsomely finished walnut box, six by nine inches in size, and about three and one-half inches thick. It has a nickel-plated bar handle, and slide catch of the same material. It opens "on the flat," as does the "Gladstone" valise, the side lying evenly upon whatever surface the case rests upon. Each side within is covered with a door upon hinges, the door being of the same material as the box. Printed directions of what will be found under each cover are pasted thereon. When closed, the case takes up but little room. When not in use, it rests upon the end of my office table nearest the door of entrance and exit, where it can be abruptly seized and carried off in an instant, with the pleasing conviction that, in any ordinary case of poisoning, I have with me almost every drug and remedy that can be needed, without losing valuable time in sending to the nearest chemist or drug store.

As the case lies open, under the right-hand flap when raised are displayed eight vials, containing the following articles, chemically pure, and in the order named:

First, solution of iron chloride; the second bottle containing calcined magnesia. When called to a case of arsenical poisoning, the contents of these two vials are to be added to a half-teacupful of warm water, with gentle stirring. A precipitate, the hydrated oxide of iron, the chemical antidote to arsenic, is formed, which, when properly diluted, is administered to the patient. As the power for good of this preparation, the hydrated oxide, depends upon its being freshly prepared, it will be seen that the physician is far better armed, having the iron chloride and the magnesia by his side, than if he had to wait until the antidote or its component parts could be procured for him.

The third bottle contains P. D. & Co.'s "Chlor-Anodyne," an article of the nature of "Chlorodyne" (formula on the bottle), and said to be superior thereto; it is anodyne and antispasmodic, and is useful in hysteria, fright, shock, etc. The next has ergot, the normal liquid, useful for controlling internal hæmorrhages, relieving local congestions, and other purposes. The next, foxglove, the normal liquid, a "cardiac tonic, and acting indirectly as a diuretic." The sixth vial holds solution of iron subsulphate, U. S. P.; and the seventh, the toxicologist's sheet anchor as an emetic before apomorphia came into general use for that purpose, zinc sulphate. The last vial on this side holds the assayed tincture of opium, with the dose at 10 minims. Each of these vials has its separate apartment, and below these is a space running the length of the box, in which can be placed additional bottles, a small corkscrew, a soft rubber catheter, or anything else of small size.

The left-hand side of the case is arranged somewhat differently. The bottles above described are all of one size. Upon lifting the left-hand cover are to be seen four large vials, two at either end of the case, and in the middle three smaller ones, the articles they contain being needed in smaller quantities, and the space thus saved being devoted to the hypodermic case and room for additional tubes of hypodermic tablets. The four large vials on this side contain "ethyl-bromide" (P. D. & Co.)—"a prompt anæsthetic when given by inhalation," and valuable in poisoning by strychnia; ammonia carbonate; calcium carbonate, precipitated—the "chemical antidote to several of the mineral acids, especially oxalic acid;" and "compound cerebral sedative," a preparation of the same nature as bromidia, and valuable in nervous troubles and cases of over-indulgence in alcohol. The smaller vials contain tannic acid, for strychnia, tobacco poisoning, etc.; citrate of caffeine, for opium, morphia, etc.; and nitrite of amyl

pearls, a most useful remedy where there is a comatose condition of the patient.

In addition to the above, which are furnished with the case, I also carry a bottle of saccharate of lime, for carbolic and oxalic acid poisoning; a small quantity of copper sulphate, which is recommended as the best emetic in cases of poisoning with phosphorus and its compounds; a bottle of essential oil of mustard, for producing quick counter-irritation; and a 1-per-cent. solution of nitroglycerin in alcohol, for hypodermatic use in the later stages of narcotic poisoning, when the patient is unable to swallow brandy or whiskey—and sometimes when he is able,—two or three minims of this solution being equal, in stimulating effect, to a very large quantity of either the whiskey or brandy.

The hypodermic syringe I use is the usual one with "wings," packed in an ordinary oblong leather-covered case, with two needles, and room for two or three tubes of tablets. Either in the hypodermic case, or in the space wherein it rests, I carry the following soluble hypodermic tablets, each in its separate tube:

Aconitine	gr. 1-120
Apomorphine muriate	gr. 1-10
Caffeine	gr. 1.
Digitalin, pure	gr. 1-100
Morphine sulphate	gr. 1-4
" "	gr. 1-2
Morphine and atropine	gr. 1-4 and gr. 1-150
Pilocarpine muriate }	gr. 1-8
Sodium chloride }	gr. 1-4
Physostigmine sulphate	gr. 1-100
Atropine sulphate	gr. 1-50
" "	gr. 1-100
Cocaine muriate	gr. 1-4
Hyoscyam. hydrobrom.	gr. 1-100
Strychnine sulphate	gr. 1-100

Fourteen tubes in all. It will be observed that some of the tablets are duplicated, though in different doses, as "morphine ¼ grain," and "morphine ½." When one is greatly hurried—the usual condition in this class of cases—it will be found much more convenient to have the exact dose one requires than to have to manufacture it by addition or subtraction. The advantage of the soluble hypodermic tablet was never more apparent than here; the dose is exact, the solution is made when needed, and in a second almost, it is fresh and therefore to be depended upon, and the physician can carry "in the hollow of his hand" remedies that, were they prepared in the old-fashioned "permanent solution," would require a medicine chest to themselves.

The Emergency and Antidote Case, with all the bottles fully charged and everything complete, weighs about three pounds. It is easily carried in one hand, or, if both hands are occupied, can be slipped under the arm.

When called to a case of suspected poisoning besides the above, I take with me generally a battery, a stomach-pump, and a No. 6 soft rubber catheter. The battery—the one recommended by Dr. Murrell, by the way—is the Appareil d' Induction Volta Faradique, de Gaiffe, à Paris. I can give no better description of it than that given by the above-named celebrated toxicologist: "It is a wonderful little instrument, and is so small that it can be carried in the breast pocket. It is ready for use in a moment, and there is nothing to spill and nothing to get out of order." It is in a flat mahogany box 6 by 4 inches, and can be strapped to the side of the antidote case or carried in the same hand with it.

The "stomach-pump" I use consists of about six feet of the best rubber tubing and a small tin funnel. With this there are no "flute keys" to get out of order, nor valves to dry up. It can be used not only to empty the stomach of its contents, but to wash it out afterwards (being made to act as a syphon), and to introduce remedies and antidotes; and the stomach end of it, being soft, is less liable to injure that organ or any protrusion it may come in contact with on its way down.

After having been in attendance upon a case of poisoning, when all is over, one way or the other, it is just as well to make a brief note of what may have occurred: the time the patient was first seen, his condition, any unusual circumstances about the case that may have aroused suspicion, and what means were taken for relief or cure. It is possible these may be never needed; but should the case become one of judicial inquiry, it will be found that memoranda taken at the time are to be depended on far more than the recollections of the busy practitioner days or weeks afterwards.

HEADACHE DUE TO TRAVEL ON RAILROAD TRAINS.—Dr. A. N. Blodgett (Boston Medical and Surgical Journal), in discussing the subject of ocular headaches, referred to a form of headaches resulting from travel on railroad trains, which he thought was more frequent than generally supposed. Treatment by any of the methods usually employed is generally without benefit. An explanation was once given him by Mr. Fox, the consulting engineer intrusted with the construction of the railway tunnel beneath the river Mersey at Liverpool. In the journey between Liverpool and London, Mr. Fox

incidentally made the remark that he always sat with his back toward the engine. The English cars are built with transverse compartments, so that the passenger is obliged to sit on a fixed seat, and therefore half the persons in a compartment are forced to sit with the back toward the engine. Mr. Fox stated that he always took that position from the fact that his eyes were thereby rendered much more comfortable during the journey. He thought that was due to the avoidance of the repeated and sudden strain in the accommodation which is rendered necessary if one is looking at a series of rapidly approaching objects, as when traveling in the train. The effect was like a blow upon the eye. If the traveler be looking backward, the objects would be constantly receding and the strain of accommodation was continually letting up, and caused no discomfort whatever. That seemed to be a very ingenious and logical explanation why some people suffer from headache and vertigo in railroad traveling. Since that time he has directed car-sick travelers to ride backward, and has adopted this method himself with the greatest comfort.—*Cincinnati Lancet-Clinic*, Oct. 29, 1892.

Current Synonyms for New Antipyretics.—In addition to their ordinary and theoretical names, the common new synthetic antipyretics bear a stately array of synonyms and commercial names. On account of this mania for manifold terms, due usually to trade interests, not only is our nomenclature and the memory of the physicians, apothecaries, and druggists overburdened, but accuracy and safety of designation are also endangered and substitutions brought about. Repeated requests for explanation and determination in dubious or disputed cases have given rise to the following list of current names for the more customary antipyretics:

Antifebrin.—Acetanilid; Phenylacetamid; Acetylphenylamin.

Antipyrin.—Phenyldimethylpyrazolon; Phenyldimethylisopyrazolon; Oxydimethylchinizin; Dimethyloxychinizin; Analgesin; Anodynin; Parodyn; Sedatin; Metozin; Phenylon; Pyracin; Pyrazolon; Phenazon.

Exalgin.—Methylphenylacetamid; Methylacetanilid; Orthomethylacetanilid; Methanilid; Methylantifebrin.

Methacetin.—Paraacetanisidin; Acetparaanisidin; Paraoxymethylacetanilid; Methoxyantifebrin.

Phenacetin.—Acetphenetidin; Acetylphenetidin; Phenetidin; Phenedin; Oxyaethanilid; Paraoxyaethylacetanilid; Oxyaethylphenylacetemid; Paraacetphenetidin; Acetparaphenetidin; Paraamidophenol.—*Pharm. Rund*, November, 1892.

Plea for the More General Use of Alkaloids.—The advantages I claim for alkaloids over galenical medications are:

First, and most important, a greater uniformity and reliability of preparations.

Second, increased accuracy of doses.

Third, the avoidance of incompatibility in prescriptions.

Fourth, a more distinct and limited effect of medicines; for in giving alkaloids we get only the action of the one agent, and not the effect of from one to a half-dozen other ingredients, as with galenical preparations.

Fifth, a greatly improved method in the administration of remedies to the patient. Drops and spoonfuls are the usual measures for ordinary preparations; drops vary in number from 44 to 250 to the fluidrachm, and the size of the spoons varies more than 100 per cent., to say nothing of the deficient filling and overflowing of spoons and the spilling of medicines in administration.

Sixth, a more concise method of treatment of disease. The prescriber must have a clear idea of what he wishes to accomplish. The action of each alkaloid is definite, and the indications are plain. "Shotgun" prescriptions with alkaloids are out of the question. The "hit or miss" plan, in which the right thing is usually missed and the wrong thing hit, will not do.

If I have settled beyond a doubt that alkaloids are superior in *action* to the galenical preparations, then I pass to the

Seventh, and last advantage I claim for them—this is, a pleasant form for administration.—V. H. Hulen in *Daniel's Texas Medical Journal* (*Medical World*).

Antipyrin in Epistaxis.—Dr. E. G. West, of Boston, Mass., says that he has yet to find an agent so reliable and prompt in its action in epistaxis or nose bleed, as antipyrin. It is his custom when a case of unusual violence occurs to saturate a pledget of cotton in a solution of antipyrin or in the dry powder, and introduce it into the nostril. It stops the bleeding in every instance that he has applied it. The patient by this method is relieved of the disagreeable tarry clots formed by the solutions of iron so commonly used for this purpose.

He finds that it is an antipyretic that can be depended upon, but he has learned to use it in smaller doses than formerly, as by so doing he can obtain the same results.

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Original Articles.

SURGICAL CLINIC.*

BY HAL C. WYMAN, M. D., PROFESSOR OF SURGERY.

Radical Cure of Hernia.—The first case that I shall show you this morning is one on which I made an operation for strangulated hernia some time ago, and when I performed the operation I endeavored to make a radical cure. I have not seen or examined the patient since that time, and what the result has been I do not know.

Eight weeks ago Mr. B., aged 45, by occupation a cook, was brought to the Hospital with a strangulated hernia of the right inguinal region, and the case was one that could not be reduced by taxis; every effort of that sort had been made, but without avail, and it became necessary to make an incision down upon the strangulated intestine, to incise the constricting band of muscular and fibrous tissues and the abdominal wall sufficiently to permit the intestine to be pushed back to where it belonged. After that was done, the opening was carefully sewed up by over-and-over stitching, using one continued suture of sterilized black silk.

The radical cure of hernia is one of the most important surgical questions of the present day. I adopted in this case a method which had previously proven successful, and I think we will find that it has worked all right here. There is one great trouble in all operations for hernia. You may succeed at the time of the operation and after a few weeks everything will seem all right, when, owing to an inherent weakness of the tissues themselves which enter into the formation of the abdominal rings, the case will relapse. Probably one way to be absolutely sure in a case of that kind would be to reef the mesentery. No doubt the mesentery is a little too long in many of these cases and allows the intestine to crowd against the abdominal wall too much, and, the abdominal wall being particularly weak at the openings, and the pressure being constant, it requires only a slight accident to cause the intestine to slip through the opening along the spermatic cord, and a hernia to develop. Then when you have carefully closed up the opening, the pressure from within being unabated—owing to the elongation of the mesentery—the hernia reappears, sometimes weeks after a radical operation.

You will notice here a very firm, hard tissue, looking almost like an induration of an inguinal gland. It is simply a mass of new connective tissue which was drawn together to close the hernial openings. There is one little pus-discharging opening or sinus which is occupied by some of the sutures; but I will remove this, and then, in this position, everything seems to be all right. However, the way to test the matter is for the patient to stand on the floor and cough several times. In this case everything is perfectly solid, and I don't believe a hernia is going to form unless it forms above or below the abdominal ring. The small quantity of fluid which passes out here is immaterial, but deep in here I find the stump of another piece of suture. When this is removed, the discharge will cease. The opening will now close up properly, and there will be no further trouble.

Between the internal and the external rings, passing from one to the other, is the spermatic cord. Now, in this hernia, at the time of strangulation, the constriction was at the internal ring, and an incision was made in an upward direction; but before reaching the point of constriction, the canal through which the spermatic cord passes was slit up. Then we incised so as to cut an opening directly into the cavity of the abdomen. The sutures were passed over and over and into the connective tissue which envelops

*Michigan College of Medicine and Surgery, Detroit, Nov. 5, 1892.

the spermatic cord, so as to stop the motion which is natural to it. These stitches went back into the tissues one-half to three-quarters of an inch, and some an inch, into the abdominal wall, and consequently we have enveloped in stitches introduced in that way a large amount of tissue. A great deal of that will be wasted and atrophied in time, and gradually the abdominal wall will be restored to its natural condition. But this line or seam will remain unless the mesentery is too long, in which event the hernia may relapse through another opening in the wall. To be perfectly radical, we need to look a little beyond the abdominal rings. We must look to the cavity of the abdomen.

Now, if it were considered good surgery to open the abdomen and simply fold the mesentery like a reef and fasten it with stitches, it would be the ideal cure for hernia. But surgery of that sort is more dangerous than the operation performed in this case, and it will probably be a great many years before it is undertaken.

In applying a bandage to this case we are careful to adjust it so that it will hold all the parts steady and prevent any undue pressure, because the tissues are soft and easily yield to pressure. It is a very good plan, in all cases of radical operations for hernia, to apply a truss for three or four months after the operation, until the tissues have become thoroughly hardened. We apply a spica bandage, carrying it around the groin and around the thigh. The parts seem unusually strong. I do not remember any case on which I have operated where there was a better union than we have here.

Club-foot.—The next case is one of club-foot—a case of talipes varus. *Talipes varus* is a term used to indicate a deformity in which the toes are turned in; *talipes valgus* indicates an abduction or turning-out of the foot; *talipes equinus* indicates a condition in which the foot and toes are extended and the foot drawn down so that the patient steps something as a horse steps—upon the points of his toes; *talipes calcaneus* is a case in which the foot is flexed upon the leg, and the patient steps upon his heel. Sometimes two terms are compounded to indicate a case in which there is more than one contraction, such as *talipes equino-varus*, in which the heel is drawn up, the foot extended and the toes turned in; and *talipes calcaneo-valgus*, in which the toes are drawn up and the foot turned out. In the treatment of this latter form we have probably the most severe of all the problems of club foot to deal with. It is a great deal like leading a horse to the water and trying to make him drink; you can do your part, but you cannot make him do his. So with a case of talipes calcaneo-valgus; we can fix the foot—twist it around straight—but it is difficult to make it stay straight. In a case of talipes equino-varus, there is a contraction of the tendo Achillis, pulling the heel up and the toes down.

The next important question in the study of club-foot is its cause. Is it the result of paralysis of the muscles, or over-stretching of them? This is sometimes an exceedingly difficult matter to decide, but generally by a careful examination of the limb you can arrive at a conclusion in regard to whether the difficulty is due to loss of nerve power or due to over-stretching of the muscles. Generally in paralytic cases one of the first things the mother will say is that the deformed foot was colder than the other, and the limb is usually shriveled. But in the case of this baby, aged 19 months, there are no such indications. The muscles which are simply weakened—which have their vitality impaired but not destroyed—can be restored to a healthy condition.

Before proceeding to operate in this case, we prepare it by making a very careful cleansing of the parts. We sterilize two pieces of cotton by heat, laying them on top of the stove. While we are waiting for the patient to get under the influence of the anæsthetic we will wash this foot with Johnson's ethereal soap. This soap loosens any fatty matter that may be on the skin and enables us to use other antiseptics. Of course the mother keeps the baby's feet clean, but family cleanliness is not surgical cleanliness. One of the slight difficulties we have to contend with is the way in which these little ones throw their limbs around.—Next we go over the field of operation with another

compound—water, carbolic acid, turpentine, and camphor.—Now we will make our tenotomy. I shall, in this case, divide the tendo Achillis first. We find that here is a little dense cord. We must, in doing this work, be careful not to divide the post-tibial artery. We push our tenetome through under the skin, then turn the blade on the tendon. There is a marked giving way. The next thing we do is to divide the plantar fascia. We commonly take advantage of the little crease in the foot for that purpose, and here we try to avoid the plantar artery.—Now the tendon and fascia are divided, and I shall straighten the foot a little by force. You see that the little foot now comes down straight, in good shape, but requires a little force to keep it there.—We will put a little cotton over those openings—little pieces of gauze that we know are sterilized because we sterilized them (not because we bought them for sterilized cotton; that may be uncertain, but when you sterilize by heat you may be pretty sure it is all right). We apply this, and the next thing we do is to roll it with a little cotton bandage that has likewise been sterilized by heat. In regard to our dressing thus far, we can feel perfectly safe.

The next step is the application of the apparatus. We place a pad between the apparatus and the leg, and we have a brace that we can adjust with a pair of pincers, and fix it so that it will work as we want it to. I want to arrange it to hold the big toe down, as this toe has a tendency to rise up. I will fix this in position by a bandage which will stick to itself but will not adhere to the skin. You will notice that the tape comes around there without much trouble. I will take a little more of the tape to fix the top of the splint, and be careful that there are no little lips of the metal here to catch and injure the limb. Now this will hold the foot in good position until we want it again. We will have to take this bandage off in a few days, and probably then we will apply one with a spring so that it will constantly drive the foot away from its tendency to assume its deformed position. The foot stays now in a very good position, but as soon as the tendon heals it will drops into its former bad shape unless it is treated by mechanical restraint and manipulation.

Still further in regard to the treatment of cases of club-foot. I have already remarked upon the difficulty of curing these cases, owing to the great tendency to relapse, and I want to say a few words in regard to the mechanical devices that have been brought before the profession for the purpose of keeping the foot in a proper position after the tendons have been divided by subcutaneous tenotomy. Generally in the treatment one will do best who combines the manipulative methods with mechanical devices, but the varieties of shoes are probably about as numerous as the performers of the operation. It is a great deal with this as it is with devices for the use of gynecologists. Just as soon as a man finds out he can sew up a laceration of the cervix and have the patient restored to health, he has achieved a great deal, and just about that time his mind begins to waver a little and he finds that the speculum which he used was not a good one, so he gets up one of his own. And just so with orthopædic surgery. When a doctor treats a case of club-foot successfully, and the baby learns to walk, the doctor makes up his mind that the club-foot shoe that he applied in that case was not as good as one he could make, and he goes to work and gets up a shoe. I have endeavored not to go to either of these extremes. I did get up a pair of obstetric forceps once, but they have never been used. I have never yet made a club-foot shoe, but I have been greatly tempted to do so. Instead of making a shoe, I am trying to invent a plate which will take the place of the mother's hand in rubbing the foot. The mother will gently rub the skin, but you can't get her to wrench the foot. There is something about the feminine heart which, when the cords begin to snap, prevents her from continuing, and for that reason I am trying to provide a substitute.

Resection of Skull for Hemiplegia.—I want you to notice that this young woman walks pretty well for a person who could not walk at all a while ago. Her case runs back to one year ago last January. About New Year's a young man threw a chair at someone, but this young woman happened to be between him and the person aimed at, and she

received the blow upon the neck. In consequence of that blow—in the course of a couple of weeks—hemiplegia developed. She went to a hospital and had treatment. She took plenty of iodide of potassium, as it was suspected that in some way the bacillus of syphilis might have gotten into her system. But a most careful examination of the history shows that the iodide of potassium and the mercury and all such things were not necessary. She had not been infected by any disease. But it was clear that there was a right-side paralysis—a loss of motion and sensibility in the right side of the body—and that it had followed the injury to the neck. We arrived at the conclusion that the difficulty was due to changes in the middle cerebral artery, and that this was due to embolus caused from a blow upon the artery. An embolus is a little obstruction that plugs a small vessel, and beyond which no blood can pass. With a view to doing everything that might possibly be done, I trephined her last summer—and on her head you will notice a scar through which I gained access to the skull—and took out about two square inches of bone. I thought to remove the natural pressure and give that portion of the brain better circulation, and thereby cause the right-side hemiplegia to disappear.

There is a marked improvement. She was very much emaciated, but now she has a pretty good arm and is generally in good condition. She is becoming more and more accustomed to the use of her muscles, and I think that the operation did her a great deal of good, and that in time we will have a complete restoration of the normal circulation in the part of the brain originally deprived of blood by the embolus.

TYPHOID FEVER.*

BY R. H. HONNER, M.D.

The prevalence during the past summer of an unusual number of cases of typhoid fever suggested to me the pertinence of introducing this subject to the Wayne County Medical Association for discussion. I will give the most of my time to the question of treatment, but will first say a few words about diagnosis.

The physician often considers himself justified in withholding his decision until he has seen the patient several times. Then the concatenation of symptoms, principally the temperature record, makes out the case. The necessity for this delay has been questioned, and recently, in a paper read before the Connecticut Medical Society, Dr. Eliot made this statement: "With a reasonable amount of care, it is just as easy to make a diagnosis of typhoid fever the first time a patient is seen as it is to make a diagnosis of pneumonia at the first visit." The discussion of this question would occupy more time than I have to spare, but I believe that although cases often occur in which the symptoms are so well marked (cases which are seen at the right stage) that a positive diagnosis can be given at once, yet many skillful physicians fail to make a diagnosis at the first visit because they are not satisfied with a few vague symptoms which may also be symptoms of other diseases.

I have noticed the frequency with which typho-malaria has been diagnosed in this city where the conditions favorable for the development of malaria are scarce. Assuming that it has not been proven that typho-malaria is a distinct disease with a distinct morbid anatomy, and that therefore it is either a typhoid condition of malaria or a combination of typhoid fever and malaria, I am inclined to believe that it is a very rare disease here. Yet I have seen cases called typho-malaria that did not show one symptom of malarial fever of either the quotidian, the tertian, or the quartan type.

The treatment of typhoid fever may be divided into antiseptic treatment (or specific treatment if you like the term better) and antipyretic treatment. The former is undoubtedly the ideal treatment, but the latter has undoubtedly given better results. It is generally conceded that there is no real specific for typhoid fever. It has been classified as a self-limited disease whose duration cannot be shortened by medicine, but conservative skepticism should not prevent us from hoping and believing that the time will come when there will be no self-limited diseases—

*Read before the Wayne County Medical Society, Oct. 20, 1892.

that the time will come when medicine will be an exact science, when the dictum of the physician will be as immutable as the astronomer's. It is only from the premises of what we know or what we think we know that we can reach the conclusion that typhoid fever is not influenced by treatment. We have not sufficient proof that treatment has not shortened or aborted some cases of typhoid fever. I can recall more than one case in which the patient showed nearly all the symptoms of typhoid fever—the progressive rise of temperature, the diarrhœa, the tenderness and gurgling in the iliac region, the coated tongue, and the hebetude of mind—from which recovery was made in a few days. I do not say that these were cases of typhoid fever, but it would be difficult to prove that they were not.

Of the specifics that I have used I will mention carbolic acid and iodine, calomel, chlorine, salol, copper arsenite, and turpentine. I have often used Bartholow's prescription of carbolic acid and tr. iodine, and apparently with good results. The German specific treatment of calomel in large doses every second day for a week has many advocates, and I think deservedly. I have obtained marked favorable results so often from the use of calomel that I have no hesitation in using it and in recommending it. Since I have commenced using it freely and boldly I have not had a case in which the bowel symptoms have caused me alarm or even anxiety. I never got any appreciable results from chlorine water. While my experience with copper arsenite is not absolutely unfavorable, yet I have not tried it thoroughly enough to be able to pass judgment upon it. Theoretically, salol ought to be an ideal remedy; but clinically, in my experience at least, it has failed to produce ideal results. Turpentine has many advocates, but, while I recognize its value in tympanitis, I would not advise its routine use.

The antipyretics I have used are cold baths, quinine, antipyrin, and acetanilid. Cold bathing has got beyond the experimental stage, and the Brand system has given some of the best results yet obtained. I have often seen quinine used without apparent results, but it was given in small doses; good results are said to be obtained from the use of doses of from 20 to 40 grains. Liebermeister avows a preference for quinine over cold bathing if confined to the one alternative. My experience with antipyrin and antifebrin has been very unfavorable, and I have discontinued their use; they will undoubtedly reduce the temperature, but I have so often seen this reduction followed by subnormal temperature and great debility that I would almost prefer the high temperature if I had no other means of reducing it.

I will here give a synopsis of my treatment, which you will see is not original, but it is the best selection that my experience has been able to make. It is a line of treatment that has given me good results, and I will continue it until experience finds a better or some true specific is discovered. It is applicable to the majority of cases—which are the cases I wish to treat of, and leave the complications to be taken up at some future time.

When I first see a patient with the symptoms of typhoid fever I give about 10 grains of calomel and the following:

℞ Ac. carbolic, } āā ℥ ss.
Tr. iodini, }

M. S.: Two drops in a wineglass of water every three hours.

If the temperature is as high as 102½°, I order cold baths administered in the following manner: A tub of cold water is placed close to the bedside. A seat is improvised and placed in the tub. (I use a wash-tub because a portable bath-tub can be found in very few houses.) In the majority of cases the patient is able to get into the tub. Water is then poured over the body, which is rubbed while the douching is continued. I generally use water of ordinary temperature drawn from the "penstock." I find this method very much more effective in reducing temperature than the sponge bath administered in bed, besides being less trouble to the nurse and, I believe, less annoying to the patient. After bathing five or ten minutes, the body is rubbed dry and the patient returned to bed. This will have to be repeated every hour or two, especially in the evening, for the greater part of the first two weeks. I generally have the baths remitted

after midnight, and then the patient usually sleeps. I have often seen the dull feverish eye brighten, and the restless semi-delirious condition change to one of quietness and comfort, after one or two baths.

The patient sometimes—the friends of the patient oftener—will protest against the first bath if they have never seen it tried, but so great is the comfort it induces that it is common to hear them calling for a repetition of the pleasure.

The heart should be carefully and frequently examined, and on the first symptom of irregularity or weakness should be stimulated. I have found the heart very responsive to the following:

℞ Strychniæ sulphatis, gr. ss.
Tr. digitalis, ʒ ij.
Sp. vini Gallici, ad ℥ ij.
M. S.: Teaspoonful, diluted, every four hours.

A dose of whiskey suitable to the age and condition of the patient may be given every two hours at the same time. When stimulants are necessary they should be given regularly and frequently or not at all. The occasional use of stimulants is not advisable; in fact, the desultory use of medicine of any kind, or of nourishment, should be avoided. There are two conditions in which the use of stimulants will be beneficial. One is a weak pulse, the other a high temperature with a dry tongue. Sometimes in the latter condition whiskey may not do any good, or may even do harm, and it should then, of course, be discontinued.

The heart-tonic should be discontinued as soon as the heart regains its strength, but it will probably have to be resumed and discontinued several times.

When there is tympanitis, turpentine will be found very valuable. Made into an emulsion, as in the following prescription, it will be palatable as well as effective:

℞ Ol. terebinthinæ, } āā ʒ j.
Albumin ovi, }
Glycerin, } āā ℥ j.
Syrupis, }
Aq. menthæ pip., ad ℥ iij.
M. Sig.: Teaspoonful every two to four hours.

During convalescence, tonics are indicated, and the following prescription is one that I often use:

℞ Tr. ferri mur., ʒ iv.
Tr. nucis vomicæ, } āā ʒ ij.
Ac. phosphoric. dil., }
Syr. aurantii cort., ℥ j.
Elix. calisayæ, ad ℥ iij.
M. Sig.: Teaspoonful in a wineglass of water three times a day.

The limitation of the diet for a long period is a source of worry to the patient and doctor, as well as to the relatives of the patient. This can be overcome by being as systematic in giving nourishment as in giving medicine. The judgment of the patient should not be consulted in the administration of either food or medicine; and, as apathy rather than irritability characterizes this disease, little difficulty will be encountered. Nourishment should be given every two or three hours as regularly as the clock strikes. Do not have the nurse tell you that the patient did not feel hungry and therefore had had nothing for six or eight hours. The difficult deglutition induced by anorexia will not be felt when the diet is liquid, as it is in typhoid fever; and liquid food can be taken without the sensation of hunger.

Milk must be the main diet, but it should be alternated with some of the articles that are used as a fever diet. Junket is nutritious and palatable. It can be made by heating a large glass of milk to a lukewarm temperature, and then stirring in a teaspoonful of some liquid preparation of pepsin, such as Parke, Davis & Co.'s pepsin cordial. It is then allowed to stand for a while, and can be flavored to suit the taste. An egg, beaten up with a little milk and sugar, can be added to the milk before the pepsin is added. Eggs can also be given in the form of custard and egg-nog, and will, with the milk, constitute a diet which, even if it be irksome, will sustain the patient through a long siege.

Although this paper has not nearly covered the subject, it will form the basis for sufficient discussion for one evening.

SYMPHYSIOTOMY, WITH THE REPORT OF AN OPERATION.

BY BARTON COOKE HIRST, M.D.

Symphysiotomy has as remarkable a history as any procedure in surgery. Suggested for the first time in the Surgery published by Pineau in 1598, and first performed upon

a living woman in 1777, the idea may be said to be three hundred years old, while its practical application dates back more than a century.* From the year of the first operation until 1858 symphysiotomy was performed 85 times in different parts of the Continent of Europe and once in England, with a mortality of 33 per cent. The frequency of the operation diminished after the first few years, until in 1858 it had practically died out. It was revived, however, in Italy in 1866, and in the succeeding twenty years 70 operations were performed with a mortality of 24 per cent. Italy continued to be the exclusive field of the operation until a year ago, when it was again tried in Paris, by Pinard, whose interest in it was aroused by a visit of Spinelli from Italy. Ten operations have since been performed in Paris, two in Dresden, and one in Strasburg. From January 1, 1886, there have been 52 operations with only a single death, and this fatal issue was due to septic infection before the operation was undertaken. Twenty-three symphysiotomies have been done already this year, and the last 34 women have all recovered.

We owe the introduction of symphysiotomy in this country to Dr. Robert P. Harris, who, as is well known, has long been interested in the subject, and at the recent meeting of the American Gynæcological Society in Brooklyn read a paper tracing the development of the operation, showing by the most laboriously collected statistics the present brilliant results achieved by it, and demonstrating, by the description of typical cases, its utility in labors otherwise insuperably obstructed by a contracted pelvis.

Ten days after Dr. Harris's paper was read, on September 30th, the first operation in this country was performed by Dr. Charles Jewett, in Brooklyn. Three days later it was again performed at the Maternity Pavilion of the University Hospital in this city.

The position of symphysiotomy is now established beyond a doubt. Its modern revival I believe to be the most important advance in obstetric surgery since the general adoption of abdominal section for the treatment of early extra-uterine pregnancy. It is applicable in contracted pelves with a conjugate over 67 millimeters, and therefore should be the method employed in almost all cases of the kind in this country, for a greater contraction of the pelvis is rarely seen among us. It should, moreover, almost entirely displace the Cæsarean section for a relative indication. It is a much simpler, an easier, and a safer operation. This is also the opinion of Leopold, who cannot be accused of prejudice against Cæsarean section, with his brilliant record in that field.

There is, and will be for some time perhaps, an objection to the operation from those who have had no experience with it, on the ground that sufficient space cannot be thus gained. In answer to this objection is the fact that the pubic bones may gape 7 centimeters after their separation, and the statement of Morisani that the conjugate is thereby increased 1.3 to 1.5 cm. But an absolutely conclusive answer is furnished by the subjoined clinical records of some typical cases:

*Leopold's First Case.**—A dwarf, 135 cm. tall, with the following pelvic measurements: Sp. il., 22 cm.; cr. il., 24 cm.; tr., 28 cm.; conj. ex., 17½ cm.; conj. diag., 8¼ cm.; conj. vera, 6¾ cm. She had been delivered thrice previously—twice of dead children, once by the induction of premature labor. After a labor of seven hours and twenty minutes, ushered in by rupture of the membranes, symphysiotomy was performed, with the head above the brim. In ten minutes the child was extracted with forceps. The head was of normal size (transverse, 9¼, 8¾ cm.; circ., 34 cm.).

Leopold's Second Case.†—A woman, delivered once before by craniotomy. The pelvic measurements were as follows: Sp. il., 22 cm.; cr. il., 25 cm.; tr., 30½ cm.; conj. ext., 16 cm.; conj. diag., 8½ cm.; conj. vera, 6¾ cm. Labor began in the evening; membranes ruptured seven hours later; operation three hours later with head above the brim. Extraction of the child in ten minutes with forceps. The head had a circumference of 35¼ cm.

Porak's Case.‡—A primipara with rhachitic

* R. P. Harris, "Amer. Syst. of Obstet.," vol. ii.

* Centralbl. f. Gyn., 1892, No. 30.

† Centralbl. f. Gyn., 1892, No. 30.

‡ Annales de Gynécologie, September, 1892.

pelvis, conjugata diagonalis being 9.6 cm., and pelvis presenting some asymmetry, very likely from scoliosis. Labor began on June 10th. About twelve hours later the membranes ruptured, and from eight to ten hours afterward the os was completely dilated. The head rested above the brim of the pelvis. Forceps were applied, but all efforts to engage and extract the head failed. The symphysis was opened, and the head then extracted "with the greatest ease" by forceps. Recovery.

*Freund's Case.**—A woman, in labor six days; water drained off for two days. After opening the symphysis the head was delivered in fifteen minutes without instruments. There were two previous deliveries, one of a dead and one of a living child. The pelvic measurements were: Sp. il., 24½ cm.; cr. il., 27 cm.; tr., 31 cm.; conj. ext., 18½ cm.; conj. diag., 10 cm.; conj. vera, 8¼ cm. The child's head after birth was found unusually large and hard: B. T., 10 cm.; B. P., 11 cm.; F. O., 12 cm.; M. O., 14 cm.; S. B., 10 cm. Circumference, O. F., 37 cm. Recovery.

Jewett's Case.†—The first symphysiotomy in America, performed by Dr. Charles Jewett, of Brooklyn, Sept. 30, 1892. Woman, a native of America, primipara, fell in labor Sept. 30, 1 o'clock A.M.; at 10 A.M. the occiput appeared at the vulva, but was held fast by an approximation of the ischiac tuberosities, reducing the bisischiac diameter to three inches. Nine hours later Dr. Jewett first saw the patient. The forceps had been vigorously used in vain. Symphysiotomy was performed two and one-half hours later, or eleven and one-half hours after the impaction of the head at the outlet. Delivery was effected by suprapubic pressure and by shelling the head out with the fingers in the rectum. The woman is now in good condition, but unfortunately the child died twenty-four hours after birth, from the compression to which the skull had been subjected during its long impaction in the pelvis.

The University Maternity Case.—A German woman, aged 19, pregnant for the first time, was admitted to the University Maternity, Sept. 24th. The examination by the resident physician and the students showed the child to be presenting by the head, the back to the right. The pelvic measurements were: Sp. il., 25 cm.; cr. il., 27 cm.; tr., 30½ cm.; conj. ex., 18 cm.

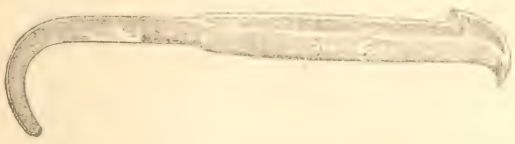
The internal examination made by myself just before operation showed the conjugata diagonalis to be 9½ cm.; conj. vera. 7¾ cm. The girl fell in labor Saturday morning, Oct. 1st. The pains, recurring all day, on Sunday became very vigorous. On Monday morning, when my attention was first called to the case, the contraction-ring was high, the uterus stood almost straight out from the body, and the child's head was movable above the superior strait. The membranes were unruptured. By no justifiable degree of force could the head be made to enter the pelvis. The fœtal heart-sounds were good. It was evidently, therefore, a choice of Cæsarean section, craniotomy, or symphysiostomy. The last was done, with the assistance of Dr. R. C. Norris and the valuable advice of Dr. R. P. Harris, who kindly consented to be present. The child was delivered with forceps in one hour and four minutes from the time the operation was begun. I purposely took my time, for the os was only the size of a dollar and was very rigid, so that a more rapid extraction would have seriously injured the cervix. Head measurements: B. T., 7½ cm.; B. P., 9 cm.; F. O., 12 cm.; M. O., 13½ cm.; circ., 34 cm. Mother and child are well.

The technique of symphysiotomy is simple and easy. After thoroughly cleansing the field of operation, and disinfecting the vagina as well, a short vertical incision is made on the abdominal wall, reaching to about three-quarters of an inch above the symphysis. The attachments of the recti muscles are severed just sufficiently to admit one finger. The forefinger of the left hand is passed under the symphysis, and upon this as a guide the curved knife of Galbiati is inserted until its beak projects under and in front of the symphysis. The joint is then cut upward and outward. To avoid injury to the urethra, a metal catheter is inserted and pressed by an assistant downward and a little to the right, while the knife is placed a little to the left; but with Galbiati's knife I should think there is little likelihood of cutting the

* Müllerheim, "Ueber die Symphysiotomie," Centralbl. f. Gyn., 1892, No. 30.

† Personal communication.

urethra or the plexus of veins in its neighborhood. I at first thought an ordinary probe-pointed, curved bistoury would serve my purpose well enough, but I quickly laid it aside, and was glad to avail myself of Galbiati's knife, an illustration of which is appended, which I happened to possess—at the time one of the three, I believe, in the country.



Galbiati's Knife.

As soon as the joint has been severed, the wound should be covered with iodoform gauze, and then the child extracted with forceps or allowed to be delivered naturally, as seems best in the individual case. I should, I think, almost always prefer the forceps. It is well to have the trochanters supported by assistants during the passage of the child through the pelvis, so that the sacro-iliac joints shall not be injured.

As soon as the delivery is completed, the wound is sewed up, the lowest stitch, if desired, passing through the top of the symphysis. How the whole symphysis can be stitched up, as Leopold claims to have done, I do not understand. After closing the wound and dressing it, rubber adhesive strips are placed around the hips and the lower abdomen, and a tight binder applied. The symphysis unites surprisingly soon, and three weeks after the operation the patient can walk as firmly and as well as ever.

There is only one disturbing thought in connection with the introduction in this country of an operation destined to do so much good. The charge of superficiality lies with some justice against us. We are too ready to reach out toward the top without a sufficient basis of solid preparation, and I fear that symphysiotomy may be undertaken by many who cannot correctly measure a pelvis and who have not the experience to decide whether a head can pass through the pelvis in which it is about to enter or in which it is engaged. There is consolation, however, in the reflection that if symphysiotomy should be done needlessly the results are not likely to be so disastrous as in the case of Cæsarean section, which, to my knowledge, was done several times unnecessarily during the excitement produced among medical men by the improved results of the simpler operation.

CARDIAC SYPHILIS.*

BY PROF. MARIANO SEMMOLA †

Syphilis of the heart forms a recent chapter of internal pathology and clinical medicine; nevertheless, I believe it deserves the fullest attention, not only with respect to the ætiology of heart affections in general, but also from the standpoint of treatment, since we possess a fairly marvelous therapy in syphilis. All cases of cardiopathia in which the lues form an etiological factor may be substantially modified by radical treatment; and in these instances the good offices of the physician should not be confined to the transient and symptomatic results which are to be achieved with so-called heart-remedies.

In the following I shall not dwell upon the cardiac affections which, of secondary character, follow more or less localized syphilitic arterites, nor upon those cardiopathias which are developed under the influence of either diffusing arterio-sclerosis or arterio-sclerosis of the coronary arteries. Nor shall I treat of the primary valvular cardiopathias in acute arthritis rheumatica which are accidentally accompanied with syphilitic lesions of the heart.

I shall here limit myself to directing your attention to an altogether different species of primary heart affections, which gain their development in veteran syphilitics and which may frequently reach the degree of a severe, non compensated heart disease, to say nothing of the influence which an ancient and latent syphilis may have on the development of these heart diseases.

These latter heart affections, which, as it seems to me, have received scant consideration from the clinic, constitute the most

* Translated by Joseph Helfman, Detroit.

† Director of the Therapeutic Clinic at Naples, Italy.

treacherous and fearful cardiopathias, since they often begin with insignificant functional disturbances, which are regarded as nervous phenomena; and, in truth, neither auscultation nor percussion reveals the signs upon which a diagnosis of organic heart-defect may be based, although an organic lesion already exists. The latter, however, is still so slight, and develops so slowly, that the manifest signs of a morbid process of the myocardium, of the heart ventricle, etc., are not yet presented, simply because *they cannot exist*, the initial morbid process not having as yet produced those subsequent pathological phenomena (dilatation, hypertrophy) which form the ominous clinical tableau of a heart disease.

The patient neglects these as yet unimportant functional disturbances, and is content with the employment of some calmatives. Meanwhile the morbid process progresses insidiously, aggravating from day to day, and finally assumes formidable proportions, so that then—and frequently too late—the attention of the patient and the physician is seriously directed to the malady.

Among these rudimentary functional disturbances, there is also one apparently insignificant symptom which the physician as a rule regards slightingly: I have seen patients and physicians lull themselves into confidence, not suspecting that they had before them a serious *arythmia*, uncomplicated or (as is frequently the case) accompanied with tachycardia. Every day clinical lectures and treatises are published on the therapy of cardiac arythmia; its nervous or arterial origin is discussed; we decide upon the use of antispasmodics, or we recommend atropine, preparations of bromine, and, in cases of arterio-sclerosis, iodine combinations as well; but in none of these papers have I seen allusion to a continuous persisting arythmia which resists all such medication. And yet there is such an arythmia; and when it fails to yield after essaying various methods of treatment, I believe the physician is justified in assuming the existence of a latent process of the myocardium, syphilitic in origin, and in at once beginning the specific treatment, as we know full well that the mercury treatment when tardily commenced is of no use; for the final anatomical sequelæ (fatty degeneration, scleroses) are no longer amenable to the curative influence of mercury.

The relations between syphilis and the heart were announced as early as 1859 by Virchow, on the basis of simple anatomico-pathological observations.

Nevertheless, for a long time, the clinic gave scant attention to this subject. In recent years, for the first time, isolated studies of "syphilis of the heart" have been published by Bogosslowsky, Jakarine, Nekan, Lang, Mauriac, Julien, and some others.

In general, all these authors based their reports either upon clinical cases of cardiopathia which were cured by the mercurial treatment, or upon anatomico-pathological observations of cases which *intra vitam* had exhibited very severe cardiac symptoms, discovering on autopsy simple or gummatous myocardites which revealed their syphilitic character.

Such is the present condition of this question. Inasmuch as I have always cherished the conviction that those heart diseases are the gravest which originate in defective nutrition of the entire heart muscle, with or without points of localization, although always it connection with dystrophic influences proceeding from the general nutrition, I have devoted my attention to this subject since the year 1883.

At this time I had opportunity to observe a cardiopathic physician with the severest symptoms of a non-compensated heart affection. All known tonic heart remedies were employed, but without avail, and the patient's doom seemed inevitable. From the account of his life I learned that he had once contracted syphilis; that the gravest syphilitic phenomena had repeatedly made their appearance; that they had always, however, been caused to vanish by appropriate mercury-iodine treatment. In coming under my observation the patient exhibited absolutely no syphilitic symptom. In such instances, however, I have long adhered to an invariable principle, imparted to me thirty-five years ago by my master, Ricord, who was wont to declare: "*If syphilis has once indubitably been contracted, then everything is possible—even the impossible.*"

I therefore began to treat my patient with

subcutaneous injections of sublimate, and prescribed large doses of sodium iodide (5 grammes within twenty-four hours). After four weeks of this treatment I presented the patient to my pupils; he was almost free from œdema, without palpitations, without arythmia, etc. The improvement continued, and our patient was enabled subsequently to resume his medical practice, and this without the administration of digitalis or any other cardiac remedy.

Since that time I have never, in my examinations of cardiopathic patients, failed to take into account their possible syphilitic antecedents. Thus I have been enabled to classify all my cardiopathic patients in two well-defined groups. In the following I mention another case, the last observed by me, to which I would direct your special attention:

Baroness B., æt. 45, has led a "joyous" life for twenty-five years, and has repeatedly disclosed the most classic symptoms of syphilis. During September of last year she came to me for treatment. Patient stated that in the main she felt very well and suffered from no pronounced complaint; in mounting stairs, however, she experienced great irregularity of the pulse, and dyspnœa.

She had already consulted various physicians, who in turn prescribed atropine, sparteine, and other medicines, without producing any improvement in her state. A nervous arythmia had been diagnosed, because, in truth, the most rigid physicial examination failed to reveal either a noise or any focus of alteration of the heart.

I could not, however, convince myself that a purely nervous arythmia would be so persistent as the patient declared. I recommended absolute rest for three or four days, and explained to her that a daily examination of her condition would be indispensable, in order to obtain an assurance with respect to the persistence of her arythmia.

After I had satisfied myself that this arythmia did not cease, even with absolute rest of the body and mind, I concluded, in view of the lady's antecedents, that her arythmia was not of nervous origin, that the case was rather one involving the sequelæ of a syphilitic infection (probably an initial myocarditis or a gummatous infiltration)—although a close external examination of the patient failed to disclose the presence of any characteristic signs of syphilis.

On the basis of this diagnosis I was of course, obliged to prescribe a specific and rigorous treatment, as in the previous case (sodium iodide per os, and sublimate injections, during the first month; subsequently, for the period of five months, inunctions of mercury—1 gramme daily). The arythmia, as well as the disturbances of breathing, vanished completely within two months, and the patient at present enjoys excellent health.

As before stated, I have never omitted, since the first case of syphilis of the heart came under my notice in 1883, to enter upon a specific treatment with cardiopathic patients who have previously suffered from syphilis—of course observing all the precautions indicated by the general condition of the patient, and keeping in sight, above all, the cardiac cachexia, that I might not later have occasion to deplore the unpleasant after-effects of the treatment.

To this treatment I resorted especially in the cases of cardiopathia not attended with noteworthy alterations of the valvular apparatus, and above all in those cases in which treatment with cardiac tonics had proved futile.

In a large number of cases I have been able to establish some improvement in the general condition and in the heart function without achieving ultimate success, and the fate of these patients was about the same as if they had not undergone the specific treatment.

Nevertheless, even in the latter cases I had the conviction that the specific treatment was very well borne—a fact which I was enabled to corroborate through hæmochromometric examinations, which I have been making in my clinic for the past three years for the purpose of estimating the action of the so-called alterative medicaments. It is certain that if under the influence of the mercurial treatment the quantity of hæmoglobin increases, even though in slight measure, there must exist in this organism a special susceptibility to the biochemical action of the mercury, without which this agent would undoubtedly tend to destroy the red blood-corpuscles.

This slight general improvement, however, naturally could not, as I have before stated, exert any favorable action on the fast alterations of the syphilitic process in the heart. The improvement of the general condition in a large number of cardiopathic patients in whom the anamnesis disclosed syphilitic antecedents, nevertheless shows peremptorily that if the specific treatment had been instituted earlier these patients might have been enabled to escape their doom and live much longer. Hence, if the chapter of cardiac syphilis from the pathologico-anatomical point of view may be regarded as sufficiently illumined, the same does not apply to the diagnosis, to which in this study I desire to make a contribution.

Beside this series of cases which, as stated, seem dubious owing to the very incomplete and transient curative results, in the course of nine years I have collected a second series of cases (twenty-seven in all) in which I was in position to enter upon specific treatment immediately at the beginning of the cardiopathia, as in the instance of the Baroness B. cited. The classic symptom of such a commencing cardiopathia is the *persistent arythmia*, at times uncomplicated, at times accompanied with tachycardia; with the occasional collateral symptom of *impeded respiration*.

In all these cases there is not the slightest valvular defect involved. The objective examination revealed only persistent cardiac ataxia. After meals or during states of emotion the arythmia at times increased into a veritable *delirium cordis*. The heart, however, never returns to its normal rhythm—not even after prolonged rest or during sleep.

Almost all these patients were enabled to follow their occupations, and suffered from no difficulty in breathing, provided they did not over-exert themselves in their labors.

All the twenty-seven patients who have come under my treatment in the course of eight years enjoy to-day a perfect cure from their arythmia. With each patient the specific treatment was renewed every year for two or three months, while the iodine treatment was continued throughout the year.

I believe the following conclusion may be drawn from my clinical observations: *When a patient who has passed through an unquestionable syphilis presents himself to the physician with symptoms of persistent arythmia which yields neither to hygienic nor to pharmaceutical remedies, the physician must straightway assume that a syphilitic process is at the bottom of the trouble, and he must prescribe to the patient a specific treatment, even if there is no symptom exhibited at the time to supply a palpable proof of constitutional syphilis.*

In more fortunate cases, where the mercurial treatment produces cure, do we encounter a beginning myocarditis or a gummatous infiltration? In this respect I must avow my ignorance, and I confine myself to the establishment of the therapeutic connection between an obstinate arythmia, recovery through specific treatment, and the assumption that this functional disturbance is related to a syphilitic process prevailing in the heart-muscle. In the present state of our knowledge of this subject, more cannot be said. Further, I am not able to assert that the arythmia repeatedly mentioned in the foregoing is a characteristic sign of a syphilitic myocarditis, for such a conclusion would indeed be premature. All the symptoms of a pronounced process of the myocardium, such as we observe in practice, possess in reality, so far as their syphilitic nature is concerned, nothing characteristic; they are simply the symptoms of serious disturbances of circulation which necessarily ensue in alterations of the heart, in consequence of the incapacity of the myocardium. When the patient dies, the autopsy reveals syphilitic lesions in the myocardium, but it is impossible to render clear and distinct the ominous clinical tableau in order to trace back the initial functional disturbances which would permit the diagnosis of a beginning myocarditis. On the other hand, if the patient recovers as a result of the specific treatment, we still forego the anatomical demonstration, and content ourselves with the simple conjecture of the presence of a syphilitic myocarditis.

The purpose of the foregoing report is simply to establish the connection prevailing between an ancient syphilis and recent cardiac disturbances, and the cure of the latter by specific treatment; it forms a clinico-therapeutic contribution to the history of cardiac

syphilis. Supported by similar reports, diagnostic data should be acquired in the future which will be of great service to the physician in presenting an appropriate and seasonable treatment.

HIP DISEASE.*

BY PROF. L. A. SAYRE.

Gentlemen:—This patient, a boy, is 7 years old, and has come to us from one of the Northwestern States for treatment. His family history is good, and his own history previous to last March was excellent. At that time he complained of pain in the right knee, and on arising in the morning he walked with a decided limp. This limping would disappear toward noon, due to exercise. As time went on, however, the limping became more pronounced and remained constantly. The mother of the child, although aware of the pain in the knee, thought it a trivial matter and that it was nothing more than growing pains. She had her attention directed to it by the neighbors remarking to her that the boy walked with a hitch. Her fears being aroused, she consulted a physician, who informed her that the child had rheumatism. The patient grew worse, and we have him here to-day for diagnosis and treatment.

It is so frequent to diagnose incipient hip disease as growing pains and as rheumatism that I cannot too profoundly impress upon you the absolute necessity of diagnosing hip disease in its earliest stages. Mark the symptoms presented by this boy: a limping gait, pain in the knee—note the exact situation of this pain, and that in occurs especially in the morning. This pain in the knee is a reflex symptom due to the obturator nerve which partially supplies the hip-joint and also sends a branch to the knee-joint. It is well for you to bear this point in mind, otherwise you may look for the seat of the disease at the site of the pain. Whenever your attention is directed to a pain in the knee-joint of a young person—these "growing pains," as the mother may tell you—look further and see if the cause is not in the hip.

To properly examine a patient for hip disease, you must strip him of all his clothing and lay him upon his back on a hard, plain, level surface. You cannot properly examine him while he is on a bed or sofa, for reasons that I shall presently show you.

We now ask this boy to stand. Notice the position which he assumes. Observe that he throws the burden of his weight on the left leg. You also observe that the right foot is everted more than the left and that the right gluteo-femoral crease has disappeared. As he walks up and down the table you notice the decided limping gait.

Now we place our little patient on his back, and you see a tilting of the pelvis and also that the right foot is everted more than the left. As I take his legs and raise them to a right-angle with the trunk, you see that his back, from the shoulders to the sacrum, lies flat on the board, as it normally should. Notice that this is the case particularly in the lumbar region. At this point the apposition is so close that I cannot introduce a finger without using force.

Now comes the important point. If this boy's hip-joints are healthy, as I lower his legs to the table this lumbar region will still remain in close apposition with the table; if they are not healthy, then the pelvis will tilt forward, and between the lumbar region and the surface of the table there will be a variable space. Very early in the disease the space thus obtained may be quite imperceptible, but close observation will usually disclose it.

To determine which hip is diseased, we again raise both legs to a right-angle with the trunk, and then by lowering each leg separately we determine which leg causes the tilting of the pelvis. In this boy, as I lower the left leg you see that the proximity of the back to the table is undisturbed, but as I lower the right leg the pelvis tilts and I can now introduce my hand easily between the lumbar region and the table; the reason for this is that the psoas and iliacus and other muscles about the diseased joint stand guard, as it were, and, working through the sympathetic system of nerves, lock the joint, thus preventing a movement that would re-

* A clinical lecture delivered at Bellevue Hospital. Reported by the special correspondent of THE MEDICAL AGE.

suit in pain. Notice, also, that as the patient lies on his back the angles formed by the intersection of the median line and a line drawn between the anterior-superior iliac spines are not right angles, as they are normally; the tilting of the pelvis on one side causes this.

We now take this right leg and, flexing it, abduct it so as to put the ligaments about the joint on the stretch. You see the boy twitches with pain; he also manifests pain by pressing upward on the limb. Pressure directly over the joint also elicits pain. These movements do not cause pain when executed on the left leg; hence we conclude that there is a diseased condition of the right hip-joint.

I now take the limb, and, while making gentle traction on it in various directions, ask the boy to tell me the direction in which traction gives him the most comfort. Having found this direction, we shall place the boy in bed, and—by means of a Buck's extension weight and pulley arranged over the foot of the bed—keep up a constant and uniform traction in this direction. The success of this form of treatment depends entirely upon getting traction in the proper direction—having it, in all these cases, made in the line of deformity as above determined.

The patient should be kept on nutritious diet and surrounded by good hygiene. Gradually bring the traction to bear in the direction in which the limb should normally be; and as soon as this is done, which may be two or three weeks, put the limb in a splint of wood or plaster-of-paris. Keep it this way until the joint is cured; then give the patient plenty of out-of-door exercise.

These cases of incipient hip-disease should receive earnest attention. By early detection and proper treatment you start them on the way to recovery; by overlooking or neglecting them you hazard the comfort and often the life of your patient, or at the best open up to them the gloomy prospects of an exsection.

Bellevue Medical College, New York City.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

B. W. PALMER, A. M., M. D., Editor.

—Published By—

GEO. S. DAVIS, Medical Publisher, Box 470.

DETROIT, MICH., NOV. 25, 1892.

Editorial.

SEXUAL PHYSIOLOGY.

The Lancet offers some excellent advice on this subject. It is only too true that young men in their conflict with temptation to sexual vice often suffer under the disadvantage of receiving but little aid from those to whom they ought to look for it with confidence:

Few parents have the knowledge and the wisdom to tell their sons the most important truths about the sexual passion just at the time when it is becoming developed in them, and the latter are therefore left an easy prey to their strange desires and to those "lewd fellows of the baser sort" who are always at hand to corrupt innocent youth. If it is true that to a very large extent parents are unmindful of one of their gravest responsibilities, it is no less true that the medical profession has often failed in its duty in connection with this subject. Medical writers and medical men generally are too often silent on this matter, and, unfortunately, when the silence has been broken it has not always been with words of truth and soberness. We are constantly hearing and saying that "knowledge is power." Yet we find that little effort is made to impart the knowledge which would largely aid in preserving the virtue of the young; and the most pernicious teaching of those who, for the lowest of reasons, propagate error, is left unnoticed. Knowledge alone will never make a people virtuous, but it is an invaluable aid to those who are striving to control their passions. Seeing on all sides the terrible physical, mental, and social havoc wrought by sexual vice, we feel that the medical profession should do its utmost to stem the evil, and, at any rate, should give utterance to the truth

with no uncertain sound. What are the physiological facts that ought to be proclaimed by the medical profession? Mainly these. In the first place, that occasional involuntary emissions of semen during sleep, and often in association with libidinous dreams, are natural occurrences in unmarried continent men, and are neither the cause nor the consequence of disease. The emissions are most frequent between the ages of eighteen and twenty-five; they vary in frequency in different men, but are favored by sedentary occupations and by lewd thoughts. The subjects of these emissions sometimes complain of various sensations of malaise, which they attribute to the depressing influence of these losses; but it is a striking fact that such symptoms are only met with in those who have an exaggerated or erroneous conception of the significance of the discharge, and that they quickly disappear when their real meaning and causation are understood. To regard such a physiological occurrence as a disease and name it "spermatorrhœa" is a very serious error.

The second fact we wish to insist upon is that sexual continence does not beget impotence, and that the all-prevailing cause of impotence is prolonged sexual excess. In support of the opposite conclusion, appeal has been made to analogy. It has been pointed out that unused muscles and bones waste, and therefore, it is urged, it must be true that continence will lead to impotence. Such argument is utterly fallacious, as are most arguments from analogy. Facts in abundance prove the contrary. Common as is sexual vice, continence is not unknown among us, and the truth of our statement is not difficult to verify. The real argument from analogy is drawn from the breast. This gland is generally inactive for many years after puberty, and yet whenever the call for its activity arrives it is more or less perfectly responded to. As a matter of fact, impotence does not depend upon the testicle, but upon the spinal cord; the sexual act is a physiological nerve storm, and not simply an act of secretion. Loss of sexual potency is due to some fault in the nerves of the parts, or more commonly in the spinal centre which presides over this function. It is often a solitary nervous phenomenon, and by itself is not of grave import.

The third physiological fact we ought to teach is that no function of the body is so influenced and controlled by the higher nerve centres as the sexual. It is excited by lewd imaginings, loose talk, and sensuous scenes. It is set in motion by even accidental stimulus of any part of the nervous system affected by the sexual orgasm. Hence the difficulty of continence. On all sides are sights and sounds that may become the stimulus of sexual excitement. The other side of the picture is equally true. By the exercise of watchfulness and self-control, the occasions of such excitement may be reduced to a minimum and the passion may be subdued. Medical men are sometimes asked to formulate rules of diet and exercise—hygienic rules—by which immorality is to be banished. The task is impracticable. Vice is voluntary, and it is only by the exercise of a resolute self-will that virtue is maintained.

We cannot but believe that were these three very elementary but fundamental physiological truths properly presented and enforced upon young men, very much misery would be avoided. Ignorance of them drives men into the clutches of ruthless charlatans, leaves them a prey to groundless fears, and often leads them into vicious habits from which they are unable to free themselves. To withhold such knowledge is in many cases to leave youths in ignorance of the one power by which they can successfully contend against the evil. We feel strongly the urgent importance of this matter, and hence we speak plainly and hope that others, as they have opportunity, will do their best to help young men in their struggle against vice.

RAILWAY SURGERY AT THE PAN-AMERICAN MEDICAL CONGRESS.

A Section of Railway Surgery of the Pan-American Medical Congress has been organized, with Dr. C. W. P. Brock, of Richmond, Virginia, as Executive President. Dr. C. B. Stemen, of Fort Wayne, has been chosen by the Wabash Railway Surgical Association—the first organization of the kind—to prepare a paper on "Organized Railway Surgery," to be read before this section at the coming Congress.

Book Notices.

NEW ENGLAND MAGAZINE.

The November New England Magazine is largely a Whittier number. The frontispiece is a fine rare picture of Whittier, taken about 1855, while he was in the full maturity of his intellectual power and in the full vigor of his life. The initial article of the number is "In Whittier's Land," by William Sloane Kennedy, who has written much, and well, about Whittier and Whitman. He goes over the scenes associated with Whittier's best work in a very interesting manner. Miss Frances C. Sparhawk deals with Whittier as the Poet and the Man, and Edwin D. Mead in his Editor's Table considers Whittier in his relation to New England thought, history, and life. Allen Eastman Cross contributes a fine poem, "The Passing of Whittier," and A. L. Carlton recalls Whittier in a poem, "On Salisbury Beach." The most important and suggestive article at this time in the number is "Private Armies—Past and Present," by Thomas B. Preston, a very able writer and a member of the New York Herald staff. Miss Louise Manning Hodgkins writes an account of Wellesley College, which will attract those interested in women's work. Richard Marsh concludes his bright, clever story, "A Prophet," in a tragic vein. Walter Blackburn Harte contributes the second paper on "The Philosophical Basis of Fiction." Irving Berdine Richman, in writing of "The Home of Black Hawk," contributes a very valuable chapter to American history and throws a new light upon some Indian chiefs. Mrs. Julia Taft Bayne writes of "Old Hadley." There is an installment of "One of a Thousand," and there are two other complete stories—"Catnip for Two," by Ethel Davis, and "The Black Deuce," by W. Grant. Titus Munson Coan contributes a fine poem, "Twilight." William Ordway Partridge, an artist-poet, has "Mid Ocean;" and Richard Hovey, the author of "Launcelot and Guinevre," one of the successes in London and New York, of last year, pays a high tribute to the late Dr. Thomas W. Parsons. William P. Andrews writes in memoriam of George William Curtis, and George S. Burleigh takes his readers "Into the Unknown." Irene Putnam chooses a more familiar path and recalls "The Old Stage Road." It is altogether a varied and excellent number.

CONTENTS OF SCRIBNER'S MAGAZINE FOR NOVEMBER.

Victor Hugo. Frontispiece. From the portrait by S. Pannemaker; engraved by G. Kruell.

The Grand Canal. By Henry James. [The seventh article in the series "Great Streets of the World."] Drawings by Alexander Zezzos; engraving by Peckwell, E. H. Del'Orme, Witte, Van Ness, and George Del'Orme.

Two Backgrounds. By Edith Wharton.

Chicago's Part in the World's Fair. By Franklin MacVeagh.

Conversations and Opinions of Victor Hugo—from unpublished papers found at Guernsey. By Octave Uzanne. With reproductions of contemporary prints and drawings by W. J. Baer, and from photographs.

Villon. By Francis B. Gummere.

Racing in Australia. By Sidney Dickinson. Drawings by Birge Harrison, C. Broughton, and V. Pérard; engraving by Witte, State, Schussler, Rodenstab, and Miss C. A. Powell.

Betrothal.

. Salem Kittredge, Theologue—His Secular Excursion—Part II. By Bliss Perry. (Conclusion.)

French Art—III. Realistic Painting. By W. C. Brownell. With reproductions of pictures by Courbet, Cazin, Vollon, L'Hermitte, Béraud, Manet, Degas, Bonnat, Ribot, Bastien-Lepage, Bonvin, and Baudry.

Stories of a Western Town—IV. Mother Emeritus. By Octave Thanet. Illustrated by A. B. Frost.

Sponge and Spongers of the Florida Reef. By Kirk Munroe. Drawings by V. Pérard, Carlton T. Chapman, and O. H. Bacher, from photographs by Moffat Bros., Key West, Fla.; engraving by E. Clément, Putnam, and George Del'Orme.

Miss Dangerlie's Roses. By Thomas Nelson Page.

The Point of View: "Inclinations" and Character—Certain New Instincts—Pessimism in Literature.

THE THANKSGIVING "FOOD."

With the Thanksgiving number of Food, its publishers have reduced the subscription price of this beautiful magazine to $1.00 per year.

The November Food is an exquisite Thanksgiving number, profusely illustrated, larger than the regular issue, and with a pretty cover in colors. Among its contents are:

"The Wheaten Loaf," an illustrated article of over thirteen pages, by F. N. Barrett, giving a picturesque analysis of the art of bread-making, and in such a way as to be of unusual interest to all who have to do with the production and consumption of this universal article of food.

Florence Morse has two articles, one on the subject of "Thanksgiving Dinners," and the other making suggestions for after-dinner entertainments on this family holiday. An illustrated article on the "Columbian Food Exposition," in Madison Square Garden, gives one a glimpse of this interesting exhibit.

A story entitled "Deviled Crabs" is contributed by David A. Curtis.

One of the pretty features of the magazine is an illustrated article by J. H. Connelly, pointing out the delights of bulb-culture and giving some practical instructions in connection therewith.

The several departments of the magazine which treat of the preparation of food and the menus for every day are, as usual, filled with interesting and useful matter.

The Clover Publishing Co. have signally manifested their enterprise in making this exceedingly low subscription price. Food is certainly a most entertaining, instructive, and daintily managed magazine, unique in its field and character.

THE STUDENTS' QUIZ SERIES. Edited by Bern B. Gallaudet, M.D., Demonstrator of Surgery, College of Physicians and Surgeons, New York. Volume XIII: Diseases of Children, by C. A. Rhodes, M.D., Instructor in Diseases of Children, New York Post-Graduate Medical School. Pocket size, 12mo.; 170 pages. Limp cloth, $1.00. Philadelphia: Lea Brothers & Co. 1892.

No subject can be of more interest to the practitioner than the diseases of children. A physician may reasonably expect a lucrative practice and the esteem of the families among which he practises if his knowledge of children's character and maladies is such as to enable him to rightly diagnose the conditions and afford relief by efficient medication. Dr. Gallaudet, the editor, is himself a teacher and practitioner of experience and is well acquainted with the *personnel* of his profession in New York. His ability is shown both in the excellence of the matter he has secured and in the uniformity and attractiveness of its presentation. Students will be greatly assisted by these volumes, and likewise physicians who wish to refresh their recollection on important points.

THE MEDICAL NEWS VISITING LIST FOR 1893. Weekly (dated, for 30 patients); Monthly (undated, for 100 patients per month); Perpetual (undated, for 30 patients weekly per year); and Perpetual (undated, for 60 patients weekly per year). The first three styles contain 32 pages of data and 176 pages of blanks. The 60-Patient Perpetual consists of 256 pages of blanks. Each style in one wallet-shaped book, pocket, pencil, rubber, and catheter-scale, etc. Seal grain leather, $1.25. Philadelphia: Lea Brothers & Co. 1892.

This List has been thoroughly revised and brought up to date in every respect. Of the first three styles the text portion (32 pages) contains most useful data for the physician and surgeon, including an alphabetical table of diseases, with the most approved remedies, and a table of doses. It also contains sections on Examination of Urine, Artificial Respiration, Incompatibles, Poisons and Antidotes, Diagnostic Table of Eruptive Fevers and the Ligation of Arteries. The classified blanks (176 pages) are arranged to hold records of all kinds of professional work, with memoranda and accounts.

The Medical News Visiting List adapts itself to any system of keeping professional accounts. When desired, a ready reference thumb-letter index is furnished, which is peculiar to this Visiting List and will save many-fold its small cost (25 cents) in the economy of time effected during a year. In short, every need of the physician seems to have been anticipated in The Medical News Visiting List.

INTERNATIONAL CLINICS. Volume II, July, 1891. Volume III, October, 1891, and Volume IV, January, 1892. A Quarterly of Clinical Lectures on Medicine, Surgery, Gynæcology, Pædiatrics, Neurology, Dermatology, Laryngology, Ophthalmology, and Otology, by Professors and Lecturers in the leading Medical Colleges of the United States, Great Britain, and Canada. Edited by John M. Keating, M.D., Philadelphia, Consulting Physician for Diseases of Women to St. Agnes' Hospital, Philadelphia, and Editor of Cyclopedia of the Diseases of Children; J. P. Crozer Griffith, M. D., Philadelphia, Clinical Professor of Diseases of Children in the University of Pennsylvania, and Professor of Clinical Medicine in the Philadelphia Polyclinic; J. Mitchell Bruce, M.D., F.R.C.S., London, England, Physician and Lecturer on Therapeutics at the Charing Cross Hospital; David W. Finlay, M.D., F.R.C.P., London, England, Physician to the Middlesex Hospital and to the Royal Hospital for Diseases of the Chest, and Lecturer on Clinical Medicine in the Middlesex Hospital Medical School. Published by the J. B. Lippincott Company, Philadelphia.

The numbers of this excellent collection of contributions to medical literature by the most distinguished teachers of medicine in this country and abroad, which are published quarterly, furnish an excellent reflex of modern views of the treatment of disease. The first number appeared in April, 1891, and the volumes for July and October, 1891, and January, 1892, contain papers by a galaxy of stars in the medical firmament. Send for complete descriptive circulars and prices to the publishers.

DISEASES OF THE CHEST, THROAT, AND NASAL CAVITIES: Including Physical Diagnosis and Diseases of the Lungs, Heart, and Aorta, Laryngology and Diseases of the Pharynx, Larynx, Nose, Thyroid Gland, and Œsophagus. By E. Fletcher Ingals, A.M., M.D., Professor of Laryngology and Practice of Medicine, Rush Medical College; Professor of Diseases of the Throat and Chest, Northwestern University Woman's Medical School; Professor of Laryngology and Rhinology, Chicago Polyclinic, etc., etc. Second Edition, revised and enlarged; 240 illustrations. Octavo, 700 pages. Extra muslin; price, $5.00. William Wood & Company, New York.

This work is not a rehash of the opinions of other authors, but is based on the author's experience, and clearly conveys the modern methods of recognizing and properly diagnosing the diseases of the chest, throat, and nasal cavities.

In the appendix is given a helpful list of formulas for prescriptions indicated in the classes of disease discussed.

We find the second edition has been much elaborated, especially the portions devoted to diseases of the lungs and heart, throat and nasal cavities.

The work is modern and helpful, and well reflects the most recent knowledge of the ætiology, pathology, symptomatology, and prognosis of this prevalent class of diseases. The student and practitioner will find it a valuable aid in study and practice.

TEXT-BOOK OF NERVOUS DISEASES. Being a Compendium for the Use of Students and Practitioners of Medicine. By Charles L. Dana, A.M., M.D., Professor of Nervous and Mental Diseases in the New York Post-Graduate Medical School, and in Dartmouth Medical College; Visiting Physician to Bellevue Hospital; Neurologist to the Montefiore Home; ex-President of the American Neurological Association, etc. With 210 illustrations. Octavo, 524 pages. Red parchment muslin; price, $3.25. Wm. Wood & Co., New York.

Dr. Dana's contributions to the study of nervous diseases are well known through his frequent reports of interesting cases in current medical literature.

We are glad to see this able presentation of the neurological art, which is divested of much that encumbers other works that have appeared. It is adapted not only for grounding students systematically in a knowledge of neurology, but also for the specialist and general practitioner, who must find useful such a modern presentation of a class of diseases which are in this electric age most prevalent.

Skill in the successful management of these diseases cannot but increase the reputation and income of those who are thoroughly informed as to latest methods of diagnosis and treatment.

THE HOME-MAKER MAGAZINE.

The Home-Maker magazine is the only high-class magazine published in America at $2.00 per year; 20 cents a number. Good for the whole family. It satisfies the active intelligence of women. It is, Gail Hamilton says, "the best union of the practicable with the intellectual of all magazines. The

Home-Maker is the ordinary magazine size, and contains each month nearly 100 pages. Its departments are: Literary, Home, Art, Household, Fashions, Topics of the Time, Correspondence and Queries, etc.

The November (Thanksgiving) number is replete with entertaining articles and is a work of art in its illustrations. It may be obtained from the publishers, The Home-Maker Co., 36 Union square, New York.

TEXT-BOOK OF OPHTHALMOLOGY. By Dr. Ernest Fuchs, Professor of Ophthalmology in the University of Vienna. Authorized Translation from the Second enlarged and improved German Edition, by A. Duane, M.D., Assistant Surgeon Ophthalmic and Aural Institute, New York. With numerous illustrations. Published by D. Appleton & Co., New York. 1892.

All those interested in ophthalmology are aware with what favor Professor Fuchs' work has been received. It is not too much to say that it is considered the first of ophthalmological text-books. The translator has made such additions as he deemed necessary to adapt the work to American readers. These additions are indicated by being bracketed. The book is well illustrated and tastefully bound, and should be read by all those interested in the latest views of so distinguished an authority.

GOLDEN RULES OF SURGICAL PRACTICE FOR THE USE OF DRESSERS. By E. Henry Fenwick, F.R.C.S. Third Edition. Revised and enlarged. Published by John Wright & Co., Bristol; Simpkin, Marshall, Hamilton, Kent & Co., Limited; and Hirschfeld Bros., 82 High Holborn, London, England.

This little book of 67 pages, now in its third edition, contains a collection of aphorisms concerning guidance in medical and surgical practice which cannot but be most helpful to the practitioner. The rules are gathered from well known standard treatises on surgery, and will afford students as well as those in practice a condensed epitome of what to do and what not to do in the emergencies of surgical practice.

The U. S. Pharmacopœia, 1890, which will be published during 1893, adopts in great measure the metric system of weights and measures; this will doubtless create much confusion in the minds of physicians and druggists, and lead to many misunderstandings and errors. In order to provide a guide to the proper dosage, etc., Dr. Geo. M. Gould, author of The New Medical Dictionary, has prepared a very complete table of the official and unofficial drugs, with doses in both the metric and English systems; this table is to published in P. Blakiston, Son & Co.'s Physicians' Visiting List for 1893, together with a short description of the metric system.

MEDICAL MATTERS MENTIONED IN JEST. By Selah. With one hundred illustrations. Era Publishing Co., Chicago. 1892.

The author of this brochure of 50 pages has evidently familiarized himself with the humorous side of medical practice. With pen-and-ink sketches and satiric conversational comment he ridicules the weaknesses, the eccentricities, the fads, the foibles of the practitioner (who is all too prevalent in this country) with superficial education and ready tongue—who covers his lack of knowledge and his mistakes by glib talk. The author has gathered also sketches of the types of medical men of different sections of the country which are highly amusing.

PROFESSOR BILLROTH'S SURGICAL CLINIC AT THE VIENNA GENERAL HOSPITAL.

Messrs. Wm. Wood & Co. have recently brought out this interesting addition to their line of pictures for physicians' offices.

It is a graphic and realistic scene of a hospital clinic with all its characteristics portrayed, and will be most appropriate for adorning the walls of the physician's office.

It is a copy of an India-proof engraving, printed on extra heavy plate paper, suitable for framing; 24x32; price, $2.00.

The Messrs. Macmillan & Co. announce that the recently completed edition of Foster's Text-Book of Physiology, in four parts, is to be supplemented by the issue of an appendix on "The Chemical Basis of the Animal Body," by A. Sheridan Lea, Sc. D., F.R.S. Dr. Lea is Lecturer on Physiology to the University of Cambridge, England.

Notes and News.

A Quick Method of Distinguishing the Comma Bacillus from Other Micro-organisms.—

It is important that Asiatic cholera should be recognized quickly, so that means for its prevention may be used, and any simple test which will enable a medical man to distinguish between ordinary cholera nostras or summer diarrhœa and the graver Asiatic cholera is of importance. A small quantity of the suspected stools is taken, and a plate cultivation made in the usual way. After twenty four hours, several colonies of bacteria will have developed, and one or more of these colonies is transferred to a tube containing nutritive bouillon containing peptone (ordinary nutritive gelatin will do equally well). The tubes are then placed in the incubator for twelve hours at 30° C., and a culture got which is treated with pure sulphuric acid free from nitrites, when there will appear in the culture a reddish-violet or purplish-red color. This color is not got with Finkler's, Emmerich's, and other intestinal bacteria usually classed with the true cholera bacilli. Fraënkel says: "Bouillon cultures exhibit the reaction very distinctly after remaining from ten to twelve hours in the incubator, while the gelatin cultures furnish it only after some days, whenever liquefaction has attacked the greater part of the culture medium." The explanation of this reaction is, according to Salkowski, that it is the common indol reaction, the indol being formed from the albuminates in the cholera cultures. The nitrates present in the salt and peptone, as also in the gelatin, are reduced by the cholera bacilli, and this affords us a quick method of distinguishing the cholera bacilli from other micro-organisms. The vibrio of Metschnikoff, which is found in the intestinal canal of poultry, also gives this reaction, but its growth on a gelatin plate is altogether different from that of Koch's comma bacillus. On developing these two growths in tubes containing bouillon or sterile soup, a marked difference is seen, as the bouillon in which the true cholera bacillus is growing keeps clear for a long time and does not change, while the bouillon with the vibrio of Metschnikoff becomes grayish-white and very cloudy after a short time.—*The Sanitary Journal.*

Cycling for Children.—

Something like a newspaper controversy is going on as to whether or not cycling is injurious to health. The matter was very well put by Dr. Luff in his address to the students at St. Mary's Hospital, and extensively quoted from our pages in the public press. Cycling is no exception to the golden rule of moderation in all things. It is the pace that kills, and unfortunately most cycling clubs appear to be disposed to encourage racing unduly. This is a great mistake; it makes the mere traversing of the ground an end, whereas it ought only to be a means to an end. The safety bicycles, which are now the favorite pattern, encourage, if they do not compel, a style of riding which tends to bow the back and contract the chest. The effect on boys and youths who are not naturally well developed is undoubtedly injurious, and we should regard with some suspicion the advice given by a medical writer in the Bicycling News, which would encourage parents to let their children bicycle. The tricycle is much better adapted for them, and, if of proper size and properly adjusted, its use may be of benefit, if the amount of exercise is carefully regulated. Probably the best companion for a child is a middle-aged rider who traverses a moderate distance and at a moderate pace, will not indulge in trials of speed against time, and is not ashamed to dismount at a hill too steep to be ridden with comfort. The strain upon the heart on a steep incline, especially if the surface is bad, may be seriously injurious.—*British Medical Journal.*

Libel and Slander of Physicians.—

A description of what constitutes libel and slander affecting physicians and surgeons is given by L. D. Bulette, Esq., in the International Medical Magazine. Words which cause an appreciable injury to the reputation, if they are false, constitute a libel when written or printed, a slander when spoken. Words which are clearly defamatory are actionable *per se*, without the necessity of proof that any particular damage has resulted from their use; if they merely tend to injure the repu-

tation of another, some perceptible injury must be proved. When the words or language used imply gross ignorance and unskillfulness in his profession, the medical practitioner may sue. It has been held that to call a physician a "quack" is thus actionable. The same is true of words charging that a physician is "an empiric and a mountebank;" or that "he is no doctor—he bought his diploma for fifty dollars;" or that "he is a quack, and if he shows you a diploma it is a forgery." It is also actionable, without proof of special damage, to say of a physician, "He has killed the child by giving it too much calomel;" or, "He has killed six children in one year;" or, "If Dr. X. had continued to treat S., she would have been in her grave before this time."

On the other hand, it is not actionable, without proof of special damage, to say, "He is a two-penny bleeder;" or, "He is so steady drunk he cannot get business any more." The same is true of words charging a physician with adultery unconnected with his professional conduct. But it would be otherwise if he had been accused of seducing or committing adultery with one of his patients. It is not actionable to charge one who is not legally authorized to practice physic or surgery or to receive compensation therefrom, with ignorance of the healing art, or with having destroyed human life by misapplied efforts; nor to say of such a person, "He is a quack" or an "impostor."—*Boston Medical and Surgical Journal.*

The Neill Case of Strychnine Poisoning.—

This case has recently excited much comment in London. The London Lancet discusses it from a psychological point of view. It states that while the jury had before them evidence more than enough to substantiate their verdict without being called upon to fix a motive to the crime of which they convicted Neill, to the psychologist the case is one of absorbing interest. That he willed to do the murderous deed, or, in other words, acted under conscious motive, there appears to be no shadow of doubt, leaving aside the absurd legal proof of criminal responsibility —"the knowledge of right and wrong, or of the nature and quality of the act." Nor can we argue in Neill's favor impulsive homicidal insanity as usually understood. At the same time it is difficult to believe that the convict perpetrated these unutterable crimes with a mind constituted to realize their enormity and with a power of will equal to resist their commission. As to what motive may have impelled him to the commission of these singularly cold blooded murders, we are at a loss to conceive. Perhaps, after all, there is some reason in the lines:

> How oft the sight of means to do ill deeds
> Makes ill deeds done.

Chloride of Ethyl: A Warning.—

H. Radcliffe Crocker, in the London Lancet, writes: In The Lancet of this week, under "New Inventions," Dr Berger's instrument for the administration of chloride of ethyl is spoken of in connection with dental as well as other minor surgical operations. I write this note as a warning, as I believe the inhalation of the vapor is not altogether free from danger. Having occasion to scarify a small patch of lupus erythematosus on the nose of a young lady, I thought it a favorable opportunity to try a chlorids of ethyl tube. The spot was frozen well enough, but the patient turned pale, slightly livid, and stopped breathing, looking very like a person under nitrous oxide gas. As I took away the ethyl at once, she recovered in a few seconds, but I should certainly not use it again to any part of the face where it was possible that the vapor could be inhaled. Chloride of methyl applied by means of a tampon is far safer and easier, but care must be taken not to over freeze the skin, or a dermatitis may be set up.

Professional Homes.—

The members of the medical profession in every city of a hundred thousand people should have their own home. They may be only able to rent a humble dwelling for such a purpose, but by all means rent until able to own, and there have a library, a reading and common sitting-room, a dining-room and kitchen. A fraternal spirit and more of hearts will there be knit together. Professional homes are promoters of peace and good-will, and from them is sure to spring the benevolent sentiment that encourages the strong to care for and not step aside to

crush out the life of the weak and perhaps unfortunate. In the cultivation of this spirit and sentiment strong men are made stronger and their lives more lovable. Their angular points are smoothed down until they are so polished as to on all occasions reflect the nobleness of soul that is within them, while the weak but deserving are held up and encouraged in practical ways.

The New Operating-Theatre of Roosevelt Hospital.—

An interesting event and a notable one in the history of Roosevelt Hospital was the formal opening, on November 3d, of the new William J. Syms Operating-Theatre. This magnificent addition to the hospital, which is without doubt the most thoroughly equipped structure of its kind in the world, owes its existence to Dr. Charles McBurney, of the surgical staff, whose representations to the late Mr. Syms secured the funds for its erection and maintenance. It is now about two years since the latter died, leaving in his will the sum of $350,000 for this purpose; of this $200,000 has been spent on the building, and the remaining $150,000 will be used as an endowment fund for its maintenance.

A Journal for Negro Physicians.—

M. Vandahurst Lynk, M. D., editor and proprietor of this prospective enterprise, announces: "The rapid increase of the educated Negro physicians of America is very gratifying. It has in it a glow of significance, and shows that the Negro intends to contribute his share to scientific medicine. But for them to attain the highest degree of development and become giants in the Æsculapian fold, it is very necessary that they should have some medium through which to communicate, exchange ideas, and inculcate a spirit of original research and investigation. Looking to this end, I shall begin the publication of a monthly medical journal. I enlist your hearty cooperation and support."

Statues of Eminent Doctors.—

"I cannot recall to mind," writes the Paris correspondent of The Lancet, "where in England there is to be found a statue to any of the good and great men in our profession who have an undoubted claim on humanity, unless it be the single exception of Harvey's in Folkestone. Not so throughout France. Paris alone has statues to Broca and others, and will shortly have one to Ricord, for which the President of the Republic has approved the sanction of the Prefect of the Seine authorizing the erection of the statue in one of the public places of Paris. To-morrow also will be inaugurated at Morlaas the bust of Depaul, formerly the well-known professor of obstetrics at the University of Paris." America has as yet but one statue of a medical man, viz., that of Dr. Sims.—*Medical Record.*

A Tribute to the Medical Profession by Madame Nilssen, the Singer.—

The London Lancet relates the following: Many years ago, so the story runs, the voice of this great artist, then in its childhood, which has held in silent admiration so many audiences, was often exposed to the wintry weather of a northern home. On one occasion an attack of acute laryngitis had nearly extinguished it for ever, but the care afforded by a neighboring hospital preserved for later times its still unawakened melody. The assistance then given was not unacknowledged, but a sum of £1,000 contributed towards the founding of a Parisian throat hospital attests to-day the gratitude of the illustrious singer and her sense of the priceless aid once rendered her by the medical profession.

A Steamer for Disease Germs.—

The new disinfecting apparatus recently made for the Boston quarantine station has been tested by the Board of Health. The machine is a high cylinder of boiler iron, seven feet in diameter and twenty feet in length. It was put under a pressure of sixty pounds to the square inch, and everything seemed satisfactory. The cylinder is fitted with thirty-six cages, twenty inches square and four feet in length. These are filled with clothing to be fumigated. Steam is then inserted from the steamboat and continued at a temperature of 212°, or over, for about twenty minutes.—*Boston Medical and Surgical Journal.*

Therapeutic Brevities.

Saloine Compound.—A new specialty is announced with the following formula: Balsam Peru, phenyl salicylate, oleum thymi, oleum monardæ, pinus pumilio, menthol, and boracic acid.

Saloine Compound is indicated in naso-pharyngeal catarrh, acute or chronic, and should be diluted one-fourth with water and used in an atomizer.

In tonsillitis, diphtheria, and pharyngitis, use as a spray or gargle.

In laryngitis, bronchitis, asthma, pertussis, and pulmonary consumption, use inhalations of vapor or spray.

When used internally, it proves of value in septic, continued, and scarlet fevers, zymotic diseases, dysentery, diarrhœa, dyspepsia, and diseases of children during dentition.

Externally, as a prophylactic and antiseptic; in surgery, dentistry, obstetrics, gynæcology, gonorrhœa, and in all catarrhal conditions of the uterus and vagina. Saloine Compound, being absolutely free from all irritating and poisonous substances, may be used *ad libitum*, full strength or diluted with water, for varied conditions.

This seems an eligible combination of antiseptics, and the Saloine Co., in this sanitary age of asepticism, who have arranged distributing centres in New York, Chicago, and Denver, seem to have hit upon a desirable compound from a therapeutic point of view.

Abortive Treatment of Variolous Pustules.—Coste (Bull. Gén. de Thérap., No. 16, 1892) has attempted to shorten the duration of the eruption of smallpox on the face as follows: The method consists in making a mask of boric lint, soaking this in boric lotion, applying it to the face, with two other exactly similar masks on top of it. In this way every part of the face is closely covered with boric wool. The whole is then covered with a mask of waterproof material, and slight pressure is applied by means of a gauze bandage. The treatment is commenced as soon as the eruption appears, and continued till the fall of the crusts, which takes place about the ninth to the twelfth day. The masks are kept moist by spraying with fresh lotion every four or five hours. Under this treatment the pustules undergo less inflammation; they rapidly disperse, and from the centre of each exudes a drop of greenish pus. On the fourth or fifth day, in place of the pustules, there is a fine epidermic layer of brownish color, which separates after five or six days and leaves no scar. There is very rarely any pigmentation left. Not only does this treatment, therefore, hasten the course of the eruption, but it diminishes the risk of scarring.

Treatment of Morphinism.—Obersteiner individualizes strictly in the treatment of the morphine habit. Beginning with the average daily dose, he withdraws it as rapidly as the patient can stand it. When the dose has been reduced to a few centigrammes, caution is necessary, as even a slight reduction is then badly borne. At this stage warm baths of from 5 to 15 minutes' duration, followed if necessary by the cold shower or cold pack for one-half hour to two hours at a temperature of 77° to 86° F., are often of benefit. Alcohol in liberal quantities often gives relief. Cocaine has no other use than to modify the symptoms, and should only be used when these become violent, say twenty-four to forty-eight hours after the last dose of morphine; it is always given by mouth in doses of 0.05 to 0.1 gramme, never exceeding 0.5 gramme per day; it should be reduced in a few days, and never continued longer than five or six days. Nutrition must be improved by all possible means. If collapse occurs, morphine must be resorted to. Patients with cardiac troubles should not be subjected to complete withdrawal.—*Wien. Med. Presse.*

Jaborandi in Hiccough.—Nobel and Stiller (Centralbl. f. Klin. Med., 1892, Nos. 42 and 42) respectively refer to the good effects produced by jaborandi in hiccough. Nobel's patient was a man suffering from influenza, and the infusion of jaborandi was used. Nobel draws attention to the fact that, notwithstanding the presence of some cyanosis, the drug had no ill effect upon the heart. He refers to other recorded cases, and adds that it remains to be proved which constituent in jaborandi brings about the good results. Stiller says that he has long used pilocarpine (10 drops of a 1-per-cent. solution three or four times a day) in hiccough of nervous origin, and that it is the best remedy known for this condition. He does not employ it in the reflex hiccough of severe abdominal disease and peritonitis. At times, and especially in hysteria, only improvement or temporary cessation in the hiccough has been obtained, necessitating the further use of the drug. Stiller says that the good effects of jaborandi are due to pilocarpine.

Protective Vaccination against Tubercle.—Hericourt and Richet (Gaz. Méd. de Paris, Oct. 22, 1892) give an account of further ex-

periments on this subject, which fully confirm the results previously obtained by them. Of seven dogs that had undergone successive vaccinations with tuberculosis of birds, not one became affected with human tuberculosis when inoculated. They were inoculated in April last, and are still perfectly healthy and have gained weight. Twenty-one dogs inoculated with human tuberculosis, without previous vaccination, all lost weight, and died, on an average, in four weeks; of this number, eleven were treated, after the inoculation, by various therapeutic measures, all of which were absolutely ineffectual.

Ichthyol in Sore Nipples.—Dr Oehren, in Therapeutische Monatscheft, No. 2, 1892, recommends ichthyol in the treatment of sore nipples, and according to the following formula:

℞ Ichthyol, ʒj
Lanolin, }
Glycerin, } āā ʒjss.
Olive oil, ʒ iss.

The advantages of this salve are: One application causes the pains to disappear, the fissures quickly heal without it being necessary to wean the child or to use a protective cap. The consistence is such that it is easily washed off after being applied, and at the same time the salve contains nothing that will harm the child.

Treatment of Anasarca.—Arnemann (Ther. Monatsh., October, 1892) says that the treatment by diuretics, diaphoretics, laxatives, cardiac tonics, etc., at length fails, and that measures have to be adopted to let out the fluid. He refers to the danger of infection when this is done by puncture, and for private practice a more convenient method is required than Southey's tubes. The author therefore recommends deep incisions, which should be long and few in number. The fluid is thus drained off rapidly, washing away with it any infecting agents, and so rendering the chances of infection small.

Cinchonamine.—Charrin, giving his experience with the above drug (Soc. de Biologie, July 16, 1892), declares it to be an alkaloid more soluble than quinine, but closely allied thereto. In animals it causes convulsions and fall of temperature. This fall of temperature is more marked in animals whose temperature has been raised by injections of microbes or of soluble poisons. The drug may be useful in some diseases, and particularly in certain forms of malaria. Its antiseptic power is but slight.

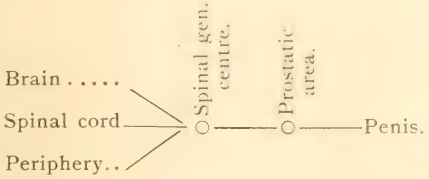
Medical Progress.

A MATERIALISTIC VIEW OF SEXUAL IMPOTENCE.—It will be acknowledged without argument, I think, that impotence and allied sexual shortcomings are not generally viewed with any degree of precision or unanimity, and are not looked upon in the definite and distinctive manner in which intermittent fever, scarlet fever, locomotor ataxia, etc., are contemplated. Neither are they treated in any definite and purposive way, each physician having his own favorite aphrodisiac formula, which is brought out for each confiding patient who "is beginning to notice a little sexual weakness, a feeling that convinces him that he is not 'as strong' as he was some years ago." It is against this generalized, uncertain, and, in nine cases out of ten, erroneous estimation of this subject, based on lack of thought as to its pathology, that I would inveigh in this paper.

Physiologists teach us that erection—that change in the male organ that is prerequisite to copulation—is brought about by an active increase in the amount of arterial blood flowing into the penis, together with a coincident and abrupt decrease in the amount of venous blood flowing out of it, both serving to gorge the penis and to produce the required rigidity; further, that the influences that stimulate this active arterial inflow and sluggish venous outflow come to these respective vessels from the erigent nerves of the spinal genital centre, situated in the sacral region of the spinal cord. Tracing these physiologic sequences still further back, we learn that such a nervous influence which goes out from the spinal genital centre originates in one of three different localities of the organism: first, in the brain; second, in the spinal cord; or third, at some part of the periphery. Familiar illustrations of these three sources as originating centres of erigent influence are seen (1) in the man who gets an erection from looking at an obscene picture, in which case the originating impression is in the brain; (2) a painter falls from a house, sustains an injury to his spinal cord, and has a constant erection—priapism—for a week or a month thereafter; (3) the masturbator arouses his erections by friction of the penis, scrotum, or anus.

So, therefore, there are three sources of origin for erection, and, conversely, if either of these three sources become diseased, the organism is liable to lose that one as an erigent centre. If the conducting mechanism becomes disordered, of course, the same effect is liable to ensue.

Therefore, diagrammatically, we might express the physiology of erection thus:



Our aim should, then, be to study the conditions that produce disorder of any one of these four parts of the economy.

To my mind the most rational and convenient classification of the several varieties of male impotence is that of organic, psychic, and symptomatic, according as the impotence is due to organic defect of the penis, to deleterious psychic influence, or to some diseased condition or agency acting on the organism. The present paper shall be confined to a discussion of the last variety.

That lack of sexual desire and capacity may result from such debilitating and depressing influences as loss of general health from any cause, such as tuberculosis, diabetes, fatigue from exhausting work, prolonged mental effort, etc., is readily admitted and easily understood; the physical and nervous forces are expended through these channels, and little force is left to be expended through the sexual channel. The lack of sexual vigor attributed to the deep-thinking philosopher is, as it should be, classical. The directly sedative effect of certain drugs, such as morphine, the bromides, lupulin, antimony, arsenic, lead, etc., should come under this head—symptomatic; the impotence that these agents sometimes produce is symptomatic of their effect.

There is yet to be mentioned a set of causes that have a more direct connection with impotence than any so far mentioned; that are more commonly overlooked; the elucidation of which, in fact, is one of the chief objects of this discussion. I refer to such causes as masturbation, excessive sexual indulgence, chronic gonorrhœa, and other genital affections. The *mode* of their production of impotence is especially important, for if that is not understood, a case having such an origin can hardly be brought to a successful issue.

In order to trace the connection between these affections and impotence, it is necessary to state that the prostatic urethra is now recognized as the sensitive area, the focal point of nervous impressions on the genital system. It is the seat of the pleasurable sensations in the crisis of intercourse. In this act the prostatic area is intensely congested and its nerves are at a high state of tension. It is, moreover, a kind of way-station, a junction for all of the nerve-telegraph lines connecting the various parts of the uro-genital system with one another; and, consequently, it bears the brunt of the injurious nervous impressions reflected from these various parts. If there is chronic irritation in the anterior urethra, from stricture located there, irritation from it is liable to be reflected back to this sensitive prostatic area. If there is excessive sexual intercourse, or repeated masturbation, or persistent sexual excitement (ungratified, perhaps), just so often is there intense vascular and nervous excitement of this area, with possible ejaculatory convulsion. Naturally, under such circumstances we would look for disorder and disease of this area, and if we examine the part through an endoscope we shall find evidences of such disease in the deep congestion of the mucous membrane, in its acute sensitiveness to contact with an instrument, in the secretion of pus there, in the frequency with which the patient urinates, etc. These are demonstrable physical effects, showing the injury done this prostatic area by the abuse heaped on the genital system in the several ways mentioned. Chronic gonorrhœa of the posterior urethra will also result in inflammation of the prostatic area.

Now, when we know that disease of this prostatic urethra is, in turn, capable of so deranging the spinal genital centre as to deprive it of its power of sending out the nervous influence inciting erections—that is, that disease of the prostatic area is capable of depriving a man of his virility—then the key to impotence from these disorders and habits is at once furnished us, and the paths for appropriate treatment are also supplied.

The pathologic sequences are therefore these: Gonorrhœa, masturbation, excessive sexual indulgence, organic stricture, narrow meatus, adherent prepuce—*anything* of the kind—through the close nervous relationship existing, arouses disease of the prostatic urethra; this, in turn, deranges the spinal genital centre, interfering with its control over erections; impotence is the result.

A plan for therapeutic action is equally as plain: First, to remove the habit or the disease that is responsible for the inflamed posterior urethra; then to remedy that posterior inflammation, and in that way restore the health of the genital or erectile centre in the spinal cord.

It so happens that disease of the prostatic area deranges the spinal genital centre so as to arouse impotence in two very different

ways: by causing either increased excitability of that centre, or abolished excitability of that centre. In the first case the person begins the act of intercourse, but the genital centre is so highly excitable that there is ejaculation before penetration can take place, and copulation is defeated. This is *relative* impotence. In the second case, because of entire lack of excitability of the genital centre, no erection is aroused at all, and *absolute* impotence may be the result. Cases in illustration of both of these forms might be detailed, but for lack of time I shall not do this.

The distinction between impotence and hyper-excitability on the one hand, and abolished excitability on the other, should be rigidly maintained, as in treatment it acts as a guide as to whether we should attempt to arouse the dormant function of sexual excitability, or allay the exaggerated excitability of a too highly-strung genital organism. I believe it is from the failure to make these fundamental pathologic distinctions that we notice such wide variance and reckless empiricism in the treatment of this affection. For instance, there is reason for surprise when we read the diametrically opposed views of such authorities as Gross and Howe as to the propriety of giving potassium bromide in cases of symptomatic impotence. Gross strongly advises the employment of the remedy, "since the parts are to be kept still further at rest by the administration of agents which diminish reflex excitability of the cord and suspend sexual desire and the power of erection." But in speaking on the same subject, Howe says: "I have no hesitation in saying that the administration of bromides in spermatorrhœa and impotence is the source of incalculable injury to the patient."

With a pathologic basis and rational distinctions such as I have given, we are furnished with guiding principles, also with the local measures properly applicable in different cases of impotence; and, from what has gone before, it certainly would seem that the agents most commonly in vogue and most promptly prescribed for such patients, viz., aphrodisiacs, are not only least beneficial, but are most harmful; for we have learned that impotence, when arising from genital disturbance, such as masturbation, etc., is the product of inflammatiou of the posterior urethra; and we know that the manner in which aphrodisiacs cause sexual excitement is by causing congestion of the sexual organs. Hence, if we prescribe them under those circumstances, we are simply adding fuel to the flame by increasing the inflammatory congestion that is already doing the damage. The better plan would therefore be to employ measures that would allay congestion and inflammation of the posterior urethra, and thus restore its *health* and functionating capacity rather than goad it with unnatural stimulants into unnatural activity. The need of a rational mode of treatment, in contradistinction to the empirical modes usually in vogue, is, consequently, readily apparent.

In the present paper I could, of course, hardly go into the details of the treatment of such cases. Their principles are embodied and partly indicated in the pathology as sketched. They consist, as already mentioned, first, in the removal of the exciting cause; second, in the reduction of the localized inflammation of the posterior urethra; third, in the restoration of the sexual capacity and inclination, through a restoration of the health of the prostatic urethra, the spinal genital centre, and the general health of the patient.

The subject of removal of the cause need not take time for discussion.

The treatment of the inflamed posterior urethra, I think, is best accomplished by the use of two series of procedures—irrigation of the entire urethra (anterior and posterior) with progressively increasing strengths of zinc-sulphate solutions, and, later, the injection of the entire urethra with progressively increasing strengths of silver-nitrate solutions. The zinc irrigation is performed, after the patient has urinated, by introducing a small-sized soft rubber catheter well into the posterior urethra, and then injecting from a large syringe a half-pint of the solution; on withdrawing the catheter, the patient passes out the solution, thus obtaining another and complete irrigation of his urethra. This is done, at first, every other day; later, with intervals of two or three days between treatments. The strength is gradually increased from ½ to 3 or 4 per cent. This is a preparatory measure for educating the urethra for the second series in the treatment.

The second series is practiced with the deep urethral syringe of Ultzmann or Keyes. The patient having urinated, the syringe is filled with a ¼-per-cent. silver-nitrate solution; the catheter stem is lubricated with glycerin (oil would prevent contact of the medicine with the membrane), and introduced until its end reaches the posterior urethra, denoted by the syringe presenting an angle of forty-five degrees with the patient's body. The solution is then injected as the instrument is withdrawn.

The first silver-nitrate injections should not be stronger than ¼ per cent., so that the sensibility of the patient may be tested; this varies very considerably in different persons. The injections are at first given with two or three days' intervals, which are gradually lengthened as the strength of the solution is increased. I seldom use a stronger solution than one of 3½ or 4 per cent.

If these measures fail, we may have recourse to the endoscope, cold steel sounds, the psychrophor, perineal douches, etc., which are all good in certain cases.

Systemic tonics are frequently indicated. If there is a tendency to hyperæsthesia, continued irritability, etc., of the prostatic urethra, I should, perhaps, advise the use of the bromides; while if the opposite condition existed—abolished irritability or excitability of that region—I should not prescribe them. Aphrodisiacs, instead of being the first, should be the last of the medical armamentarium brought to bear on the case. I believe that the field for their use in such cases is indeed very limited; that their only application could be in case the several restorative measures mentioned had accomplished the ends desired, the health of the parts had been reëstablished, and yet excitability had not returned; then it *might* be proper to stimulate the latent sexual function with some of the aphrodisiacs, such as phosphorus, cantharides, damiana, etc. These might then manifest a beneficial effect in a way that was not expected of them; that is, if there were any psychic element in the case, they might stimulate to one pretty good erection, which would have the moral influence of restoring the confideuce of a timid patient.—Bransford Lewis, M.D., of St. Louis, in *Medical News*, Nov. 19, 1892.

THE TREATMENT OF BURNS IN CHILDREN.—One of the most common forms of emergency cases met with in general practice is a burn, and more often than not the victim is a child. The danger to life in these accidents stands *cæteris paribus* in direct ratio to the extent of surface involved and in inverse ratio to the age of the child. A death following a serious burn must generally be attributed to what we call shock, by which we probably mean that the excessive painful stimulation of the nerve ends has caused a lowering of the vascular tension and heart paralysis. Thus, Kaposi says: "It is only necessary to pour over a child's arm or forearm a fluid at 212° F., and no matter whether the burn be of the first or second degree, even if its extent be limited, such an injury may, within three days, be followed by eclampsia and death." In other cases the cause of death may be different. Thus some have held that the suppression of the sweat secretion may bring about a fatal result, which others attribute to a destruction of the red blood-corpuscles, and others, again, to thrombosis consequent on an increase in the power of coagulability of the blood. Clinical observations, however, fail to support these theories, pointing rather to the absorption at the seat of the wound of certain products, which act as poison. Lustgarten supposes the toxic substance to have something of the nature of a "muscarine" ptomaine.

Following the supporters of the last mentioned theory, the indications in the treatment of burns are twofold: (1) The employment of a dressing which, while allaying the pain, will be aseptic; (2) the employment of measures to counteract the excessive irritation of the nerve endings and the consequent prostration.

From a lengthy list of local remedies, we would mention only the following: (1) Carron oil (equal parts of lime water and olive or cotton-seed oil); (2) iodoformized vaselin (1:20 or 1:10); (3) iodoform gauze; (4) various dry powders—(*a*) iodoform with bismuth and starch, (*b*) dermatol; (5) ointments of boric or salicylic acid or of europhen; and (6) the antiseptic bath.

The dressing must be such as will allay the fearful pain and irritation, and at the same time favor the healing of the wound. The first requirement is better met by the dressings with ointment than by the dry dressing. The latter, however, possesses this advantage, viz., that it does not need to be renewed so frequently, and because the healing process goes on more quickly under a dry crust, though, unfortunately, pus formations and lymphangitis have sometimes developed beneath these powders. Perhaps the substance which will most nearly meet both requirements is iodoformized vaselin, but where it has to be applied for weeks over an extensive raw surface there will always be danger of poisoning. Unfortunately, this condition might easily be overlooked, since the symptoms (restlessness, sleeplessness, sopor, or delirium) by which it manifests itself are about the same as might occur after a severe burn. For this reason many authors condemn the use of iodoform in the case of very young children. Where, however, we employ it, we may obtain some information as to the danger of toxic effects, from the finding of an excess of iodine in the urine. Carron oil, which has been used so successfully and has many advocates, has

lately fallen into disrepute, not only on the ground that it is not antiseptic, but because it even aids fermentation and facilitates the production of septic material. The use of carbolized carron oil has met with little favor, and justly so, because it is doubtful whether the acid can be used in quantities sufficient to do any good without running the risk of poisoning. Wertheimber, in an article in the Münchener Medicinische Wochenschrift of August 2, 1892, recommends the combination of thymol with carron oil in the proportion of one or two per cent. His experience was that with this combination the wound remained free from odor and showed a rapid tendency to heal. The burned surface was washed with lukewarm (sterilized) water, and strips of gauze saturated with the solution were laid over it. The gauze was in turn covered with sterilized cotton and secured by a roller bandage. As the patients often complain after a time of the stickiness of the agent, after a week or so he generally substitutes for it the following ointment:

Bismuth subnitrate, ʒ ij.
Boric acid, ʒ j.
Lanolin, ℥ ijss.

By using a pure preparation of bismuth, he has never seen any signs of arsenical poisoning. We would recommend that the ointment be spread upon gutta percha tissue rather than upon any textile fabric.

The internal treatment is of great importance. It is a risky procedure to attempt to allay all the pain with morphine, as in such cases it is not difficult to bring on collapse. In children under two years it is safer to dispense with internal sedatives altogether, but where circumstances call for it in older children we need not hesitate to diminish to some extent the intense irritation and give the patient comparative ease. For this purpose small doses of morphine or chloral hydrate may be used with caution. We may give, perhaps, $\frac{1}{30}$ to $\frac{1}{15}$ grain of morphine at night, carefully watching any tendency to sopor, which would indicate the approach of collapse. If the child is restless, cannot sleep, and shows signs of convulsions, chloral may be preferable; we might give two or three grains in solution three times a day, increasing or diminishing the dose according to the age of the patient and the requirements of the case.

Much more frequently, however, than sedatives, are stimulants needed. In an urgent case we may have to give injections of camphor, whiskey, or the like, but where the danger is not immediate these may be given by the mouth. Perhaps, for children, the best of all stimulants is champagne, given in small quantities, repeated frequently. The patients do not dislike it, and it is generally well borne and is less likely than other preparations of alcohol to cause nausea or vomiting. The diet should be the same as in other cases of severe traumatism. —*Annals of Gynæcology and Pædiatry*, October, 1892.

EUCALYPTOL IN DIPHTHERIA.*—A diphtheria epidemic prevaded portions of San Francisco during the winter months of 1891–92. It was most plentiful and virulent in that part of the city where there was a stagnation of sewage. The writer was located in that quarter and had ample opportunity for the practical study of this much dreaded disease.

Years ago California imported the Australian gum tree, the *Eucalyptus globulus*, for shade, it being a tree of rapid growth. The inhabitants soon learned that it absorbed malaria and transformed unhealthy into healthy localities. The writer observed in the above epidemic that diphtheria was rarely if ever found in houses surrounded by eucalyptus trees.

Eucalyptol is a powerful germicide, a disinfectant, a stomachic, a tonic, a stimulant and antiperiodic.

In small doses it produces mental activity, accelerates circulation and respiration, excites salivary secretion, promotes appetite, induces diaphoresis, and increases the elimination of urea.

It is expelled from the system through the mucous membrane of the fauces, trachea, bronchi, skin, and kidneys. In short, it possesses all of the characteristics that a remedy should possess to meet the requirements of the pathological conditions found in a typical case of diphtheria.

In diphtheritic inflammation, the exudation being not only upon but within the mucous structure, the therapeutic action of eucalyptol seems clearly indicated. The Löffler-Klebs bacillus fastens not only upon the surface but beneath it; and an agent to be effective must destroy it wherever found, and at the same time produce no injury to the healthy tissue in and upon which it abounds. Eucalyptol fills that requirement.

Its tonic and stomachic power overcomes

*Read in the Section of Laryngology and Otology at the Forty-third Annual Meeting of the American Medical Association, held at Detroit, Mich., June, 1892, by Marion Thrasher, M. D., of San Francisco, Cal.

anorexia and places the stomach in a condition to digest nutritious food and fortify the system against the general depression of the vital organs so characteristic of this disease.

Blood-poisoning is early indicated in the saffron skin, which may be counteracted, if not overcome, by the administration internally of eucalyptol, bichloride of mercury, and quinine. Cardiac weakness should be anticipated by giving from the outset a generous diet of milk and eggs, supplemented hourly with brandy and digitalis.

Ventilation should be looked after, and everything in the sick-chamber should be kept disinfected and scrupulously clean.

The writer uses a 10-per-cent. solution of eucalyptol in pure alcohol, and applies the solution locally to the diphtheritic exudation, hourly day and night. In addition he gives it internally every hour with quinine, iron, and bichloride. Dr. Forcheimer, of Cincinnati, in a very able article in the International Clinic, first called the writer's attention to eucalyptol in the treatment of throat affections.

The writer has abandoned the use of trypsin, papayotin, and peroxide of hydrogen, as membrane-solvents.

The ætiology and pathology of diphtheria, a malady so appropriately named "the enemy of childhood," was but little understood until recently. The ignorance of the medical practitioner was such that every step he took only increased the gravity of the prognosis.

The erroneous idea that the diphtheritic membrane was but a fungous growth upon the throat surface, only to be removed by cauterization, was followed by disastrous results.

No physician was dextrous enough to swab the throat and touch only the diseased part; much less the inexperienced nurse to whom the task was usually assigned.

The operation would be difficult enough were the patient an adult, which was seldom the case; but when it was a crying, squirming, fighting child, is it to be wondered at that the lunar caustic made dozens of blistering patches on the hitherto healthy tissue, on which the false membrane would further spread?

Need we be astonished that under such misconception of pathology and treatment the disease produced such an alarming mortality?

The fatality is greater among the children from three to five years of age for no other reason than from the fact it is so difficult, at this early age, to practically medicate the throat.

The writer has in a measure overcome the difficulty by forcibly compelling the child to swallow semi-hourly the eucalyptol solution, which, passing over the diseased tissue, accomplished what is affected in older children with the swab or gargle.

Unlike most other remedies, should it come in contact with the adjoining healthy mucous membrane, as it undoubtedly will, it will give tonicity to the parts and in addition render them antiseptic, thus preventing the spread of the exudation.

In conclusion, while the writer does not claim that eucalyptol is a specific for diphtheria, yet he believes its general use in the disease will show a decided diminution in its mortality.—*Journal of the American Medical Association*, Oct. 29, 1892.

THE HEALING OF WOUNDS BY FIRST INTENTION THROUGH THE USE OF SALICYLATE OF SODIUM.—The annals of surgery show a large decrease in the mortality through the modern scientific management of surgical operations, but there certainly is a large field for further investigations; the idea of antiseptic surgery is a correct one, but the application of so-called antiseptics is far from being based on true scientific principles.

An antiseptic that has caustic and poisonous properties, one that not only destroys bacteria but is capable of poisoning the whole system by absorption, is not a true antiseptic according to nature's laws of repair, but a so-called mechanical antiseptic. A true antiseptic, when applied to the wounded surface, should stimulate and assist repair by preventing all decomposition, at the same time destroying all external poisons that would inoculate the wounded tissues.

I had often thought while dressing wounds that if I could find a dressing that would heal wounds by first intention, where repair by granulation was not needed, what a grand thing it would be in preventing scars and preserving the normal condition of wounded parts. But this I failed to do until the old maxim that "Necessity is the mother of invention" proved true and brought about a treatment which has enabled me to heal all wounds by first intention when so desired. While practicing in a small town, I was called to the country to see a patient, and on the road met a man on his way to town after a physician to attend a neighbor who had been hurt by a heavy beam falling on him. I went with him and found a man about forty years of age, who had been hurt by the sharp edge of a large beam striking him on

the head, making a large and deep scalp wound. When I looked for my pocket-case of instruments, I found that I had forgotten to put them in my pocket. So I took a pair of scissors and a razor and shaved off the hair from the wound, and with a common sewing needle with cotton thread (as no silk was to be obtained) sewed up the wound, which required a number of stitches.

The patient drank more or less all the time, and was under the influence of liquor when I saw him. My first thought was to guard against erysipelas. When I opened my case to get something to dress the wound with, I found that I had nothing with me that would answer except a small quantity of salicylic acid, which I first thought to sprinkle on the wound dry as I had often done, but found that I had not enough to cover the wounded surface, so I asked for a glass of water and some baking soda. I dissolved the acid with the soda and then added water enough to make about a 20-per-cent. solution; then, taking a piece of muslin of three or four thicknesses, I saturated it with the liquid and applied it to the wound, directing them to renew the application every two or three hours or often enough to keep the wound moist until my return the next day.

Great was my surprise, at my visit the next afternoon, to find but little inflammation, the edges of the wound already beginning to contract together, presenting every appearance of healing by first intention.

To make amends for my carelessness in being caught with my medicine case so empty, I had gone well supplied with dressings, intending to use whichever I deemed best, but concluded to let well enough alone, directing them to continue the treatment until I removed the stitches, which was done on the fourth day. I found the wound already closed, without a particle of pus, not even around the stitch openings. In fact, I had never seen a wound heal so nicely in so short a time.

It has now been over twelve years since my experience, and I have as yet to see the first case that did not heal by first intention where it was properly used. I have also used it in minor surgery, both as a dressing and antiseptic, with the most gratifying results, and have come to regard it as the only true antiseptic dressing that I have ever used. While it is true that corrosive sublimate is a valuable antiseptic, it possesses poisonous properties which render its use most dangerous in many cases. The healing of wounds by first intention through the use of salicylate of sodium, prevents scars and often deformities from suppuration.

I remember one case among many, where a boy received an injury to his eye by a piece of glass cutting through the lid, dividing the cornea about one-sixteenth of an inch. I not only healed the cut in the lid by first intention, preventing ptosis, but prevented suppuration of the cornea, leaving the eye in good condition. I use from 10 grains to 2 drachms, each, of pure salicylic acid and bicarbonate of sodium to the ounce of water, reducing the strength as the wound heals, always applying it either with gauze or three or four thicknesses of muslin, and keeping the wound moist with the solution until closed. I found with this, as with other dressings, that they should not be used with cotton, as there is in the process of repair a constant waste being thrown off which should not be retarded or confined by the use of cotton.—J. T. Hall, M.D., Chicago, Ill., in *International Journal of Surgery*, October, 1892.

Buffalo Lithia Water in the Treatment of Renal Calculi.—Dr. Albert Goodwin, of Eufaula, Ala., states that for a number of years he has prescribed Buffalo lithia water, with uniformly efficacious results, in gout, rheumatic gout, rheumatism, and all diseases of a uric acid diathesis, and its extraordinary therapeutic value prompts him to report the following cases of renal calculi dependent upon a uric acid diathesis, relieved by its use after the failure of other approved treatment:

J. N. L., a cotton merchant, between forty-five and fifty years of age, was subject for six or seven years to frequent attacks of nephritic colic, and almost invariably passed a calculus after each paroxysm. The paroxysms finally became so frequent that the colic was almost constantly present, rendering his existence miserable. Of necessity, resort was had to opium and other anodynes, with a view to mitigating his intense suffering, until he became a confirmed victim of the morphine habit. His nervous system was shattered, and he was indeed a mere wreck. In this condition, by Dr. Goodwin's advice he visited the Buffalo Lithia Springs, Virginia. For several months previous there had been a continuous pain in the right kidney, caused, as Dr. Goodwin thought, by retained calculi or incrustations in the pelvis of the kidney.

After a few weeks' use of the water of spring No. 2 the beneficial results were very marked, the paroxysms became less frequent and of less severity, and there commenced a free discharge of calculi and sand, which

continued for some three weeks, gradually diminishing and finally ceasing altogether. This was followed by rapid improvement in his general condition, and some weeks afterward he returned home in full and vigorous health, having gained while at the springs forty pounds in weight.. By the continued use of the water after returning to his home he was enabled to overcome the morphine habit entirely, and lived for some years, having no return of his old disease.

This water proved not less efficacious in a similar case in Dr. Goodwin's own person. In October, 1890, he was attacked with nephritic colic of the severest type. Within a period of seven or eight weeks he had from fifteen to twenty paroxysms, none of them lasting less than two hours, and most of them from six to fourteen. The free and continued use of Buffalo lithia water resulted in a total cessation of the attacks and the restoration of his general health, which had been much impaired. There has been no return of the attacks up to this date—August 15, 1892. He has prescribed this water in other similar cases with decidedly beneficial results, and has no hesitation in saying that as a remedy in such cases it has no equal among the medicines or mineral waters of which he has any knowledge. It is especially adapted, he says, to cases in men who are broken down by the long and continued use of alcohol and opium in their various forms.—*New York Medical Journal.*

Ætiology of Acute Rheumatism.—Sahli (Correspondenz-Blatt f. Schw. Aerzte, xxii, 1892) first mentions the theoretical grounds on which acute rheumatism is looked upon as an infective disease. Hitherto the bacteriological examination has been negative except in Guttmann's case where, however, there were also abscesses in the kidney and a purulent pericarditis. The tissues themselves and not the joint exudation must be examined, but the opportunity does not often occur. The author then records a fatal case of acute rheumatism in a girl aged 16, in which there was pericarditis, double pleurisy, and fresh endocarditis of the mitral, tricuspid, and aortic valves. There was no suppuration anywhere. Pure cultures, which corresponded exactly with those of the staphylococcus citreus, were obtained from the organs, from the pericardial exudation and endocardial vegetations, but not from the articular effusions. The question arises as to the relation of the staphylococcus to the disease—whether it was the actual cause of it, or a secondary infection. As regards the latter, it must be remembered that the complications were only such as are generally met with in acute rheumatism, and that the micro-organism was relatively scarce in the blood. It cannot be said from this case that acute rheumatism is a staphylococcus-infection; and yet the view is tenable (although rheumatism is only quite exceptionally associated with suppuration), because it is known that the virulence of micro-organisms, and especially of the staphylococcus, varies. The coccus found was not altogether identical with the usual pyogenic coccus, for inoculation experiments upon rabbits gave a negative result, but the author intends to make further experiments on animals with it. The most probable explanation of this observation is that acute rheumatism with its complications is a staphylococcus infection, brought about either by staphylococci whose pyogenic properties have been compromised or by a micro-organism different from, but closely related to, the pus-producing coccus. Further investigations are needed.—*British Medical Journal*, Oct. 22, 1892.

Twenty-five Cases of Extirpation of the Uterus for Cancer—A Consideration of Ultimate Results.—Dr. Charles A. L. Reed, of Cincinnati, presented to the recent meeting of the American Association of Obstetricians and Gynæcologists a report of twenty-five cases of complete vaginal extirpation of the womb for cancer, with only two primary deaths—one from shock and one from iodoform poisoning. Of the twenty-five operated upon, but fourteen were of more than two years' standing and hence were all that could be discussed with reference to their ultimate results. These fourteen were divisible into two classes of seven each, viz., those in which the disease had existed for more than six months before the operation, and those in which it had existed for less than six months before the operation. Of the first class, *i.e.*, those of more than six months' (an average of 10+ months) previous duration, all were dead; of the second class, *i.e.*, those of less than six months' (an average of 4+ months) previous duration, only one has since died. One of the recoveries is of more than five years' duration. The conclusion from these figures is that cases of cancer of the uterus ought to be remanded for operation as soon as diagnosed. Dr. Reed looks upon total extirpation as the only operation to be advised or practiced in these cases, the primary mortality from which, in experienced hands, varies from 5 to 8 per cent.

THE INTERNAL TREATMENT OF PITYRIASIS VERSICOLOR.—It may seem strange to many that a disease whose ætiology and therapy are so simple—a parasitic affection of the cutaneous covering, requiring only a few applications of iodine, sulphur, naphthol, or resorcin to remove all the lesions present—should require any internal treatment.

Such, however, appears not to be the case so far as two French physicians, De Molènes and Costilhes, are concerned. These gentlemen attempt to show, in an article published in the Archives Générales de Médecine, October, 1891, that unless internal treatment be combined with local applications the soil will remain the same, and, internal disorders being left unchanged, the conditions predisposing to the implantation and development of the germ will often suffice to determine new attacks.

Among the disorders found associated with pityriasis versicolor, phthisis and dilatation of the stomach are most prominently mentioned.

It has been a common observation for many years that consumptives often acquire this disease, but this has usually been attributed to the fact of excessive sweating keeping the skin soft and in a condition favorable to germ growth.

Dilatation of the stomach has already been found in frequent association with a disease somewhat similar to that under discussion, to-wit, pityriasis rosea.

In many non-parasitic skin diseases digestive disorders are well known to have the most important influence, and it seems not unreasonable to suppose with these gentlemen that parasitic ones may find more chance to spread where a defective elimination has reacted upon the emunctories of the skin. Here the surface becomes fatty and acid, two conditions favorable to the germination of parasites.

Before the microsporon furfur was discovered, internal remedies were relied upon to effect a cure, while external applications held a very secondary position. This was because of the mistaken idea that the macula hepatica, as the lesion was then called, was due to liver derangement or was dependent upon some stomach or blood disease.

The authors would not have us go back to a treatment based upon such erroneous views, but would have us remember that faulty digestion is a most fruitful source of the seborrhœal conditions so indispensable to the germs of pityriasis versicolor.

The cure of constipation, and maintaining the whole digestive tract in as antiseptic a condition as possible, are the chief aims of internal treatment as recommended.

After enumerating the many cathartics applicable to the various forms of constipation, the following formula is given, which has been found useful in the double rôle of antiseptic and laxative:

℞ Sodæ bicarb.,
Naphthol or salol., } aa 10 grammes.
Magnes. calcin., }

To make thirty powders, one to be taken before each meal.

This, combined with such an external application as the following, recommended by Brocq, will be all-sufficient to cure the attack and prevent recurrence:

℞ Acid. salicylic., 2 to 3 grammes.
Sulphur precip., 10 to 15 grammes.
Lanolini, 70 grammes.
Vaselin, 10 grammes.

In this way the parasite is destroyed and the ground is rendered sterile.—*Medical Record*, NOV. 12, 1892.

BACTERIOLOGICAL DIFFERENTIATION.—The process of differentation as regards the methods of action of bacteria is gradually being accomplished, and most interesting experiments have been designed to enable us to study such differentiation in connection with the action of the tubercle bacillus on the animal body. Koch's treatment, of course, depends entirely for its success on an accurate understanding of this question. In a "Study of Experimental Pneumonitis in the Rabbit," Dr. Mitchell Prudden of New York, continuing the account of his researches on the action of dead tubercle bacilli, suggests that as a result of a careful study of the processes set up in the lungs of the rabbit we may make out three different actions of the bacillus tuberculosis and its products: (1) The action of the protein—which is set free from these organisms as they degenerate in contact with living cells—which sets up cell growth, and therefore probably a reparative rather than a degenerative action; (2) the caseous degeneration so frequently met with in tuberculous lesions he considers may be due to the action of some metabolic product of the growth of the tubercle bacillus, this product being wholly distinct from the cell-stimulating bacterio-protein; whilst their still remains another factor (3), probably "of toxic nature, to which many of the graver systemic effects of tubercular infection are due." This is an exceedingly interesting subject, and one well worthy of further careful study.—*London Lancet.*

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Original Articles.

SUPPOSED PREGNANCY.*

BY E. E. MONTGOMERY, M.D.†

The first patient I bring before you is a woman 39 years of age, whose father died of apoplexy, and one sister of smallpox; mother, two sisters, and one brother, living. She had the usual diseases of childhood; began to menstruate at 14, and has always been regular. Is married; one child living, and two dead—one died half an hour after birth, one at fifteen months. Labors were normal. Previous to last Wednesday she had not menstruated since April 15th. For three months following she suffered from nausea and vomiting, and the breasts have been more or less painful. She thinks she has felt fœtal movements for a month past.

Here we have to consider the history of a woman who for five months has not menstruated. Bloody discharge occurred during the last week. She has had during this time nausea and vomiting, and has felt what she supposed to be fœtal movements.

I have not seen this patient before, and propose this morning to make a careful examination and determine the condition producing these symptoms. You will see by the abdomen that she has had previous abdominal distension. I say previous, for the reason that these cicatricial lines over the surface of the abdomen are pearly and glistening in appearance, and not red as they would be if the distension were of recent occurrence. These stria or scars are not pathognomonic of pregnancy, as they may result from any abdominal distension—any distension sufficient to give rise to rupture of the middle layer of the skin. Thus, they may be due to simple obesity, to ascites, to ovarian tumor, to fibroid growths, or to any condition which is sufficient to produce the distension. As this patient lies upon her back, you will notice that the distension is, if anything, a little increased to the left side, it being more prominent than the right. The abdomen is somewhat flattened in shape, it is, however, rather prominent.

We will now proceed to examine the patient and determine whether her symptoms indicate that pregnancy is in existence and this blood-flow is the mere engorgement of the uterus or the effort on the part of that organ to expel its contents. We proceed to make palpation over the abdomen in a careful manner, in order not to awaken irritation and contraction of the abdominal muscles. As I press my hand deeply into the centre, I feel the pulsation of the aorta beneath the fingers. Now, if this woman were pregnant five months, we would find the uterus rising nearly to the level of the umbilicus, and such depression of the abdomen would be impossible. As my fingers press deeply into the pelvis, I find no evidence of a tumor or distension there, although this patient was admitted to the house under the supposition that she was pregnant. It is not unusual to find patients sojourning in the waiting-rooms of this institution for a length of time, supposing themselves pregnant. In some the abdominal distension is due, as in this patient, to an accumulation of gas in the intestines. The relaxed condition of the abdominal muscles results from previous distension of the abdomen.

Just what has been the cause of the cessation of the menstruation, is difficult to determine. It is not an unusual thing for women near the climacteric to have the menstrual flow fail to appear for a number of months. In this patient it is possibly the indication of a premature advent of the menopause; it is

*A clinical lecture delivered at the Philadelphia Hospital, Oct. 13, 1892.

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certain there is no indication, so far as physical signs are present, of the existence of pregnancy. The cessation of menstruation, taken together with the nausea and vomiting, might indicate that there is some pelvic irritation, possibly of the nature of chronic endometritis, which has produced the peculiar phenomena. In the majority of cases, however, chronic endometritis gives rise to excessive menstruation, though there are cases in which its influence upon the system is such as to bring about for a period of time absence of the flow.

She says that during the last five months she has been suffering from profuse discharge, and that this is yellowish in color. It is possible that the absence of bloody flow has been induced by the excessive leucorrhœa. We might also infer that there is lessened irritation of the ovaries, and if ovulation does take place it has less influence upon the circulation of the uterus than is ordinary. The mere fact that the patient does not menstruate is no indication that ovulation does not occur, as it is well known that women become pregnant during the period of lactation and have a number of children without having menstruated between them. Again, it is not unfrequently found that women have become pregnant subsequent to the menopause—after the active nervous influence upon the uterine mucous membrane has ceased to give rise to the periodical congestion.

From the history of this patient I thought it not improbable there might be some growth in the abdomen to occasion the supposition on her part that pregnancy was present; but palpation, as you see, has disclosed the entire absence of anything in the abdomen or pelvis of the character of an ovarian growth. There is no special tenderness over the uterus or ovaries, and the finger can be pressed in without giving rise to the slightest intimation of an enlargement of any organ.

I have seen a number of cases of *young* women who had not menstruated for a number of months—one in particular, where the intermission lasted eleven months; she presented a symmetrical enlargement of the abdomen; there was a sensation of elasticity without fluctuation; the tumor was regular in its outline, but vaginal examination left it uncertain as to its relation to the uterus, and it was exceedingly difficult to determine whether we had pregnancy or some condition simulating it. The fact that the condition had lasted eleven months precluded the possibility of pregnancy, although we cannot always tell in such cases from the history the patient may present. She may be interested in misleading you with regard to it, and you have to be on your guard in securing the history. Thus, it is not an unfrequent thing for unmarried women, in order to conceal their condition and mislead the physician, to go on denying the possibility of pregnancy up to and after the begining of labor. Abdominal incision was made, and it was found the tumor was one of a semi-solid character, made up of ovarian structure in which the stroma of the ovary, greatly hypertrophied, was filled with a large number of cysts not larger than a plum, thus making a large tumor in which cystic degeneration of nearly every Graafian follicle had occurred.

In this case the history apparently precludes the possibility of pregnancy. In pregnancy of such duration we should be able to distinguish the parts of the fœtus.

The importance of diagnosis will be appreciated when we realize that not unfrequently a young girl may be suspected of having been indiscreet, when a later and more careful examination discloses the fact that the individual has been suffering from a tumor. We can hardly realize anything more trying to bear, and this consideration should lead us in every case to eliminate every possible condition before we give rise to even an expression of the slightest suspicion of this character.

That women near the climacteric not unfrequently mislead themselves as well as others, is definitely attested by the literature of the profession. Numbers of cases are on record where women have gone to supposed term, gone into labor, and yet examination would disclose the absence of pregnancy. A historical case is that of Queen Mary, who not only misled herself and her physician, but had the entire empire rejoicing over the prospect of her giving birth to an heir to the throne.

EXTERNAL PERINEAL URETHROTOMY FOR STRICTURE AND OTHER CAUSES.*

W. B. ROGERS, M.D.†

The term Perineal Section has for so long a time been applied to the operation of opening the membranous urethra by an incision through the perineum, that it will indeed be difficult to replace it entirely by the more descriptive term, External Perineal Urethrotomy. Nevertheless, the latter is by far the better term, inasmuch as it conveys unmistakably and at once, even to the student in anatomy, a correct idea of the procedure under consideration, while perineal section is liable to be confounded with the numerous operations being done even on the perineum of the female. External perineal urethrotomy is definite and descriptive, while perineal section is, to say the least, ambiguous, and future writers should avoid its use.

External perineal urethrotomy is done for various purposes, namely: To facilitate the use of instruments within the bladder in the removal of tumors, calculi, and foreign bodies introduced from without; to facilitate the use of instruments in operations on the prostate gland and removal of prostatic calculi; for the removal of calculi engaged in the urethral canal; for the relief of stricture of the membranous urethra; to insure drainage as well as free escape of urine in cases of a urethra ruptured traumatically or otherwise, as well as to divert the urine and give rest to the anterior urethra after operations thereon; to give a more direct course to the bladder for introduction of catheter in cases of retention from enlarged prostate; lastly, as a part of the operation for securing drainage and consequent rest to a chronically inflamed bladder.

External perineal urethrotomy done for the removal of a piece of catheter from a bladder in the case of an otherwise healthy urethra and normal perineum, is a simple procedure. Scarcely more than a single stroke of the knife—no vessel of import is wounded—and the merest novice in surgery, nay, in anatomy, need not hesitate.

A broad-grooved steel staff has been passed to the bladder and is held firmly against the pubes, and the scrotum has been drawn well forward—both by an assistant; the point of the left index finger in the rectum has located the staff and taken up its position just in front of the apex of the prostate gland, when a narrow-bladed bistoury in the operator's right hand is entered one to one and a half inches in front of the anus, exactly in the median line, and made to pass down to the groove on the staff just anterior to the point of the index still in the rectum; the groove in the staff having been entered, the knife glides onward to the apex of the prostate, and as it is withdrawn the urethra and perineal tissues are divided toward the rectum, making an opening sufficiently large to freely admit the index finger and forceps to be passed to the bladder. Such is external perineal urethrotomy *with a guide*. So simple, so easily done in thirty seconds, so free from danger!

But look you now on this picture: A perineum red, tense, and bulging; a scrotum almost projecting itself forward, firm, tense, infiltrated, and here and there marked by fistulous openings, discharging foul-smelling pus—careful inspection shows but the faintest outline of a perineal raphe, and that thrown to the side; palpation detects scarcely more than the sides of the subpubic arch; per rectum the finger locates the prostate, and pubic rami for a short distance, but all else felt anteriorly is a hard, swollen mass. The history of the case is one of multiple stricture of years' standing; efforts at dilatation have resulted in false passages; the urethral tissues have been cicatrized to the last degree by electricity in the hands of a novice. The bladder is now filled to its capacity; the new-formed perineal abscess has produced a high temperature with occasional rigors; and an hour's careful effort aided by anæsthesia has not succeeded in passing a guide beyond the bulb. Here is a case for you for external perineal urethrotomy *without a guide*.

An anatomist can readily reach the healthy urethra through the normal perineum, without the aid of a staff or other urethral guide,

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and that too with comparatively little danger to the patient—he has his landmarks to go by; but when these are destroyed by old fistulæ, by new collections of pus distorting the median line and even the course of the urethra itself, by inflammatory processes blending and matting together into one conglomerate mass every muscle and plane of fascia, the scene has changed, and anatomical knowledge and skill are taxed to their utmost, as line by line the tissues are cautiously divided from without inward, until finally, aided by a good light and guided by the sense of touch of his left index finger, the operator finds and opens the urethra, and then passes a probe steadily onward to the bladder. The opening of the membranous urethra by an incision through a pus-infiltrated perineum, without the aid of a urethral guide, has been rightly styled one of the most delicate and difficult operations in surgery.

It has been my privilege to do the operation of external perineal urethrotomy in forty-one instances. It has been done for nearly every cause for which such an operation is demanded: foreign bodies in the bladder and urethra; vesical, prostatic, and urethral calculi; chronic cystitis; tortuous urethra from enlarged prostate; stricture of the membranous urethra, simple and complicated; and traumatic rupture of the urethra. And while some of the cases offered a fair field for operating, the remaining ones collectively presented every difficulty and complication possibly pertaining to such cases.

Hæmorrhage.—In three instances the bleeding was arterial, and was controlled by hæmostatic forceps left *in situ* from sixty to ninety hours. I consider it far better to leave these forceps on than to attempt to tie the bleeding-point deeply situated and perhaps in inflamed tissue. In several cases bleeding, while not active arterial, was sufficiently free to be quite troublesome; this I was able to control by packing the wound with either iodoform gauze or an aseptic sponge, to be retained for forty-eight to sixty hours. The gauze, in my experience, is preferable; it remains sweet longer than does the sponge. In tamponing the wound, provision must be made for the escape of urine from the bladder. For a long time I found great difficulty in retaining a catheter in the bladder, even passed the entire length of the urethra; but the following method, learned from an extract, I think, from the paper of some English surgeon, has served me admirably: A soft-rubber velvet-eyed catheter, of the size of urethra in question, is selected. A needle, armed with double silk ligature, large size, is passed transversely through the wall of the catheter, encroaching as little as possible on its calibre, at say 3 to 3½ inches from its point. The threads are cut and the needle laid aside. The catheter is now passed the entire length of the urethra, until the velvet eye rests just within the bladder, when the ligatures will be found lying at the bottom of the wound in the perineum, to be drawn down by means of forceps. A piece of gauze, folded to a compress or tampon of size sufficient to fill the wound closely, is packed in, and there tied to the catheter by means of the ligatures. This tampon serves to check hæmorrhage, as well as to prevent the catheter escaping from the bladder and urethra. A bow knot should be used in tying the threads, because it will sometimes be found necessary to change the gauze tampon before it is deemed advisable to remove the catheter. I have ventured to give this means of retaining a catheter in the bladder, because I have seen no mention of it in any text-book. In addition to this tampon the usual compress of gauze and cotton is put on, and retained by means of the T bandage.

Of the forty-one cases operated on, there were but five to die; two died of sepsis, due to already existing gangrene of the parts; three died from exhaustion. In no instance was death attributable nearly or remotely to the operation. Five operations were done without a urethral guide. One case received no benefit whatever. In two cases permanent perineal fistula was desired. In one case the patient left prematurely with suture in the urethra. Of the remaining thirty-three I can learn of but one who has a perineal fistula; that is very small, and gives very slight inconvenience. When the operation was done for uncomplicated stricture in the membranous urethra alone, neither rigors nor reactionary fever followed, but, on the contrary, in several instances where these

symptoms were present, a complete calm followed immediately on the operation. In the after-treatment, rigors and fever occasionally occurred at the first introduction of the sound. The chief reliance in the control of these symptoms (rigor and fever) has been morphia hypodermatically.

In two cases there was quite troublesome hæmorrhage, coming on two and a half and seven days respectively after the operation. The bleeding, however, did not in either case come from the perineal structures, but from the bulbous urethra, where in each case urethrotomy had been done.

In no case did pelvic cellulitis or septic symptoms follow upon the operation, but, on the contrary, the operation relieved the former complication and unquestionably prevented the latter, in several instances. Indeed, with cleanliness ou the part of the surgeon and his instruments, followed by thorough irrigation of the bladder, urethra, and all contiguous parts with hot boracic-acid solutions, and with proper attention paid the gauze packing in the wound, septic symptoms are not to be expected. The wound is a large one, and so situated as to drain itself. All pockets, fistulæ, etc., connected with the perineum, should be laid open, cleansed, and packed with gauze, at time of operation. The catheter is not needed in all cases, and when required can usually be removed and dispensed with after sixty hours. The patient's hips should then be brought to the edge of the bed, thighs flexed and held by an assistant, and the wound, urethra, and bladder thoroughly irrigated with hot boracic-acid water twice daily, and then a drachm of iodoformed glycerin thrown into the mouth of the penis and forced down to the wound in the perineum.

Apropos of this operation done for stricture of the membranous urethra, it has been argued that no urethra is ever so contracted from organic stricture that a drop of urine cannot find its way through, and that if such apparently be the condition in any case it is because of the spasmodic and inflammatory elements added to the real condition, and that opium, hot hip-baths, etc., will overcome the complications and water will flow, though it be but in drops—therefore there is no such thing as impermeable stricture. But in answer I say, what does all of that amount to in face of the practical fact that strictures are met with every day, so narrow in calibre, so tortuous in course, and so encircled by false passages and abscess cavities, that prolonged and careful efforts at the passage of instruments to the bladder not only prove futile but are attended with absolute danger? And the plain fact stares us in the face—impassable strictures do exist.

It is, moreover, true that while a given stricture is so permeable between its "bad spells" that the patient empties the bladder with comfort, yet the same urethra remains impermeable to even the smallest guide going toward the bladder. The surgeon then must judge each case on its merits, as to whether it is better to aspirate the bladder, open perineal abscesses, and adopt such like measures as may be indicated, postponing radical operative interference until the morrow, or act then and there without any guide. I do not think any urethra should be given up as impassable to instruments until at least an hour's careful effort has been made, and that, too, with the patient anæsthetized; such has been my rule.

As regards Cocke's operation, a modification of the operation under consideration, I am free to confess I have not practiced it in its purity of detail. I have contented myself with finding the urethra, and opening it wherever I could between the prostate and the triangular ligament, and thankful have I been to succeed under a good light and the liberal use of retractors. There is a certain degree of dash and boldness about it that is rather captivating, but when we come to analyze its advantages over the regulation external perineal urethrotomy without a guide, they fade to naught. To those unfamiliar with the procedure (Cocke's operation) I would venture to describe it. There is assumed always to exist a "healthy portion of the urethra, often dilated and accessible to the knife, behind the stricture; that is, that portion of the urethra which emerges from the apex of the prostate, a part which is never the subject of stricture." This point, as it leaves the prostate, is sought for first carefully, with the index finger in the rectum, then boldly with a bistoury, which is passed from the centre of the perineum directly to

the desired healthy urethra, as located and kept under survey of the left index; the canal opened, a catheter is passed, which is retained *in situ* until an improved condition of the perineal parts obtains, then such steps taken as are warranted under the improved condition. This diverting of the urine per catheter relieves the parts of a great source of irritation, and they improve rapidly, as is well known. I venture the suggestion, however, that if the entire membranous urethra with attendant perineal fistulæ and abscesses were laid open and cleansed, and the urethra in front and all the parts cleansed and kept clean by repeated daily irrigations, the parts would regain a healthier condition, and with far greater rapidity, than if they had been left undisturbed and only relieved of the irritating effects of the urine.

The assumption of that healthy dilated portion of the canal just at the apex of the prostate is the keystone to the operation. Such a condition doubtless frequently exists, and most often in those cases where a urethral guide is obtainable, or where the perineum yet presents a field for anatomical research; but I should enter my knife with fear and trembling of failure to find such a healthy dilated part in some instances such as I have met with.

Wheelhouse's operation requires an accessible half-inch of membranous urethra anterior to the stricture, between the bulbous urethra and the stricture, and into this he opens upon a staff. His operation is an external perineal urethrotomy done on a grooved steel guide, and does not merit any especial consideration. It was doubtless done by hundreds of surgeons prior to its being named, and hundreds of times since by men who have never seen a Wheelhouse staff. In five of my cases the operation was done on a pocket probe, because a staff could not have approached to the perineal urethra.

As regards the treatment of stricture in the membranous urethra where a guide is obtainable, I would briefly say that I consider the division of the stricture, by an incision made from without through the perineum, safer than internal urethrotomy on the same stricture, and on the whole equally as satisfactory in its results; hence I advise it, and practice it in all cases coming under my care wherein the cutting operation is indicated.

TUMOR OF THE LIVER IN WHICH REMOVAL WAS ATTEMPTED.

BY JOHN E. ROBERTS, M.D.

M. F., aged 60 years, was admitted to the Woman's Hospital, May 24, 1892, with the following history: From girlhood she had enjoyed almost uninterrupted health until a comparatively recent time, when she suffered a good deal with indigestion and pain under the right shoulder and left breast. She was a married woman and had borne six children. About four months before applying for treatment she noticed, when undressing at night, a lump in the right side of the abdomen about as large as a fist, which seemed very hard. This growth had, she thought, increased very rapidly and had extended somewhat to the left side of the abdomen; it was the seat of some tenderness on pressure. The notes, however, do not seem to indicate that she suffered any very great inconvenience from this abnormal condition.

The physical examination of the patient showed nothing abnormal in the lungs or in the heart, except that the latter was rather weak. The urine contained no albumin or sugar; was acid on reaction; had a specific gravity of 1.015, and was voided to the amount of thirty ounces in twenty-four hours; it contained amorphous phosphates and uric acid. She had no jaundice. Examination of the pelvic organs showed nothing especially wrong. Palpation of the abdomen disclosed a hard, smooth mass in the right hypochondrium, which did not seem to extend back into the kidney region, and was so prominent anteriorly that it made a distinct elevation of the abdominal parietes, which was evident on mere inspection. The abdomen was not tympanitic, and showed no evidence of intraperitoneal fluid. The tumor was localized, and moved upward and downward during the respiratory act. It seemed, on careful investigation, to be probably connected with the liver, though this diagnosis was not definitely determined. An exploratory incision was recommended and carried out on June 3d, with the ordinary aseptic precautions in laparotomy cases.

An incision in the middle line was made, and extended for about seven inches, one-half of which was above and the other half below the umbilicus. Upon opening the peritoneal cavity I found in the right lobe of the liver a tumor resembling in shape a flattened cobble-stone, circular in outline and about three inches in diameter. It was perhaps an inch and a half thick, and located in the anterior portion of the right lobe of the liver, involving the edge, which was thickened by the infiltrated growth. The mass lay directly above the gall-bladder. There were no adhesions between the tumor and the intestines, omentum, or abdominal wall. The area of the healthy liver tissues surrounding the tumor was readily discernible, because the growth, though not incapsulated, had a distinct outline where it came in contact with the uninfiltrated liver tissue. The surface of the growth was of a dirty brownish-white color, and showed irregular puckerings of the peritoneal investment of the liver, as though the peritoneum was thickened by chronic interstitial inflammation. No other growth was found in any part of the liver which could be reached by careful exploration with my hand. Although I believed the tumor to be a malignant one, I considered it a proper case for excision, because there was no infiltrated tissue beyond the immediate seat of the tumor.

My intention was to excise the mass with a Paquelin thermo-cautery knife, and I began by separating the gall-bladder from the under surface of the tumor by means of a hot knife. Before I had dissected the gall-bladder loose, a quite free hæmorrhage occurred from the surface of the liver from a vein the size of a goose-quill, which was opened by the cautery. Just at this time one of the rubber bulbs of the thermo-cautery burst and destroyed the instrument for further use. Not expecting to use the Paquelin cautery, I did not have a second instrument in readiness; I was, therefore, obliged to abandon the operation because of the evident risk from profuse hæmorrhage, which would probably be uncontrollable without the use of the cautery. It did not seem wise to allow the patient to wait under ether with the abdomen opened until another instrument could be obtained. I was also deterred from proceeding by the fact that the operation was, under the best circumstances, grave, and the permission of her friends had been given somewhat unwillingly. To arrest the hæmorrhage from the large vein, I stitched the gall-bladder in its former position against the liver, so as to close the opening in the vein by pressure. This was done with several silk sutures, and answered admirably. I intended, after the patient recovered from the immediate effects of the operation and gained strength, to reopen the abdomen and, with two thermo-cauteries at hand, make a second attempt at removal of the growth. The patient was put to bed, did well, and the temperature remained about normal. During the time of convalescence, however, she was quite weak, complained occasionally of pain in the abdomen, and had a little irritation of the bladder, causing her urine to dribble. The stitches were removed in the ordinary time, but the patient was not discharged until July 12, 1892. There was no marked change in the liver growth that could be appreciated through the flaccid bladder wall. Her detention in the hospital for so long a time was due to her feebleness and to the fact that in the latter part of June she had what appeared to be a slight attack of pleurisy. This, however, did not cause her temperature to rise much over 100°. She was feeble during the whole time of her stay in the hospital, her pulse varying from 100 to 112; even when she was discharged, the pulse counted over 100.

The condition found by the exploratory incision was described to her and to her friends, and an effort made to obtain their consent to a second operation definitely planned for the radical removal of what was believed to be a malignant growth which could only have a final fatal issue. The feeble condition of the patient, however, did not permit me or Dr. Fullerton to urge the operation as much as we would have done had the patient been younger and in vigorous health. It was impossible to obtain the consent of her friends to the operation, and the case, therefore, passed out of my hands.

It seemed to me that hæmorrhage would be greatly diminished by encircling the growth, before excision, with a series of interlocking sutures of strong silk carried through

the entire thickness of the liver. This, as I told the hospital class, would probably be my method of guarding against bleeding. The excision would then have been made with the cautery. There would have been left, of course, a large hemispherical wound in the anterior portion of the liver.

The patient died Sept. 17, 1892, but I was ignorant of the fact until after she had been buried. Her physician, Dr. C. K. Rowe, writes that before death the patient's skin became of a decidedly yellow hue, that the tumor had increased somewhat in size, and that two or three small tumors were discovered on the back and neck. She became very much emaciated, and apparently died from exhaustion.

At the time that the patient whose history is recorded was under my care I was not familiar with the report of Dr. L. McL. Tiffany* on his case of removal of a small tumor of the liver, or with the details of Dr. W. W. Keen's case of excision of a cystic adenoma from the liver.† I had heard that Dr. Keen had successfully removed a growth from a liver, but I had not seen the report. These two cases, so far as was known to Dr. Keen at the time his paper was written, were the only instances of resection of the liver for the removal of tumor that had occurred in America.

Dr. Tiffany's patient was a man, aged 25 years, from whom a small tumor was taken from the left lobe of the liver, leaving a cavity in the surface of the liver an inch in depth and an inch and a half in diameter. Previous to the removal of this growth the parietal peritoneum was stitched to the liver around the area to be operated upon. Excision of the tumor was then performed by means of scissors, and the Paquelin cautery was applied to the bleeding surface. The tumor, which had been a painful one, "was composed of liver tissue in which there was much exudation, while scattered through the growth were many fine grains of sand—no doubt minute calculi."

The patient operated upon by Dr. Keen was a woman, aged 31 years, who had suffered with a slowly growing lump in the right side of the abdomen for about two years' time. The tumor proved to be a cystic adenoma of the bile-ducts; it was three and a half inches vertically and nearly of the same dimensions transversely; at its base where it joined the liver substance it was two and a half inches thick. Its internal border lay next to the gall-bladder, which had to be dissected loose for one-half inch in order to afford access to the growth in the operation of removal. Dr. Keen's first idea was to ligate the thick border of attachment before applying the cautery to cut through the liver tissue; he, therefore, put one stitch directly through the liver substance near to the gall-bladder. After this was tied he used the cautery. The cautery knife acted so satisfactorily that he found no necessity for further ligation of the liver substance surrounding the tumor, but removed the growth partly by the use of the cautery and partly by enucleation with the finger-nail. The large veins that he met with while making the incision with the hot metal were ligated, as they were discovered, before the cautery divided them. The two flaps of liver tissue left by the removal of the growth were then sutured together, very much as flaps are stitched after amputation of a limb.

The cases of Drs. Tiffany and Keen both recovered, and were in good health months after the operation. Dr. Keen's paper includes a list of twenty reported cases of removal of hepatic tumor, which was compiled by Dr. T. S. Westcott after thorough search through a large mass of literature.

Consideration of these cases induces Dr. Keen to believe that quite a large portion of the liver can be removed without extreme danger to the patient; that the entrance of bile into the peritoneal cavity, which is not necessarily fatal, can be prevented by searing the surface of the liver, by ligation, or by fastening the stump to the addominal wall in a manner similar to that used by Dr. Tiffany in his case to which I have just referred. Hæmorrhage need not be great, as the divided vessels can be tied separately or in mass, or treated by pressure, by the cautery, or by a combination of all of these hæmostatic measures. The mortality shown by the cases tabulated by Dr. Westcott is about ten per cent.

* International Medical Magazine for April, 1892.

† Boston Medical and Surgical Journal, April 28, 1892.

PROPHYLAXIS.

BY CARL KORDENAT, M.D.

It appears to my mind, and surely to many other physicians also, that the time is near when our profession's main attention will be called more to the prevention than to the curing of diseases; in other words, that we will have a better and more thankful field in prophylaxis than in therapeusis. I also think that the study of prophylaxis is a more absolute one, a more scientific, more realistic one, than that of therapeusis. To illustrate this, allow me to draw your attention to the fact that we have, up to this date, a non-positive cure for the most dangerous diseases, but, thanks to the untiring workers, Pasteur, Koch, Klemperer, Fränkel, and, last, the great Jenner, an almost positive preventive for the same.

Each individual physician in our widespread medical world combats diseases from the first day he steps into his medical career up to the day when he is obliged to retire. He cannot conscientiously state to himself or to others that his medicines have conquered a disease. All our ideas differ in regard to treatment; and right here allow me to say that proof enough of this is the amusing fact that every journal we receive has a new, a specific treatment for diphtheria, tuberculosis, etc., and which we, tempted by the exigencies of the case, experiment with on some of our unhappy patients, but only to throw the would-be panacea overboard, discouraged and disgusted, after a disappointed trial. So the entire therapeusis is to be regarded more as a hypothesis than a *facto vera:* Again and again we are obliged to hear the not unverified remark from the laity that all our efforts depend upon luck, and we must consequently state to ourselves the undeniable fact that the secret in medical science is solely the uncertainty of its remedies—that we cannot positively say whether the disease has been vanquished through the action of the drug or through some physiological antidote internally produced or manufactured.

But, on the other hand, we have a *most decided* action, for instance, of the lymph in variola. It is no longer guesswork, it is no longer an experiment, to vaccinate; and Jenner has immortalized himself—not that he cured cases of smallpox, but that he has prevented the disease to a great extent. The same may be said of Pasteur in regard to anthrax, or of Koch in regard to cholera asiatica and tuberculosis; of Klemperer, Fränkel, Behring, and others, in regard to diphtheria, tetanus, etc.

In order to be somewhat systematical in my thesis, and to be better understood by my colleagues, I venture to divide this paper into two parts, viz.: *The Prevention of Non-microbic Diseases* caused by non-microbic agents; and *The Prevention of Microbic Diseases.*

The first question suggested by this problem would be: What should be done to prevent diseases? The answer to this is simple indeed. First, let us consider at what time of life we shall begin to care for a human being. Not at childhood, not at infancy, but prior to this—before the child is born, in intra-uterine life. Prepare the child for arrival in this world by treating the mother. We would not have one abortion in five gestations if we paid a little more attention to pregnant women, and surely less or almost no premature births if we took proper care of them. A woman in this condition should have the most favorable surroundings, sanitary as well as æsthetical; she should be excluded from all hardship whatever, and receive only the best nourishment, bodily as well as mental. This care she ought to receive at least three months prior and three months subsequent to parturition.

The new-born child should be treated aseptically, be bathed once a day in plenty of warm water, not simply washed with a wet rag. I will restrict myself to those rules which ought to be observed in all cases, irrespective of the child's sex or temperament, etc.

The Food. Mother's milk, if possible, should be the only nourishment for the first year, and if practicable also for the larger part of the second year, at least until the child has passed the most irritable and dangerous time of dentition and the whole intestinal and digestive tract is fully developed and capable of digesting other than albuminous food. If mother's milk is not ob-

tainable, cow's milk properly sweetened, diluted, and salted may be given, providing the milk and water are boiled previous to being mixed. This simple feeding would prevent a great many of the so-called summer complaints, convulsions, and digestive disorders at large. Children's diseases depend largely on the immorality of mothers not nursing their children.

As the child grows up, the milk diet should be maintained and should be the chief diet for nearly ten years, so that we may call this period the milk age of human life.

It is not necessary to say that this period of life is the most important for the future, and that the physical as well as mental impressions received during this time have a great bearing on the individual; consequently, to strengthen and develop the young boy or girl, it is necessary to begin, as early as practicable—

Bodily exercise—we may say with boys at 7, and with girls at 6 years of age. When we speak of bodily exercise we certainly mean a systematic developing exercise, such as we notice in our city schools under the supervision of graduated teachers. Our large cities in this country have already adopted the European plan, and have made gymnastics obligatory in their public schools. Next to the turning, or gymnastics, I may mention another exercise—singing. No physician will dispute the value of this exercise. Singing not only expands the chest, develops the lungs, and strengthens the heart, but it also is the very best purifier of the blood, and consequently of the brain. It is the best exhilarative for the young mind, and surely more elevating than the secret study of dime novels. We as a class of physicians should try to induce the school board to engage teachers who are capable of teaching singing to the pupils—and not in a closed school-room alone, but also in the open air.

Very important to the growing child is the proper selection of *Clothing*. It must be our object to prevent eye diseases caused by stiff high collars, and in females sexual disorders caused by high-heeled shoes and tight corsets. The clothing should be appropriate, comfortable, and warm, all the year round.

The *Diet* must certainly change gradually as puberty advances, and must become more roborant; in fact, the diet is to be considered the chief factor in the prevention of non-microbic diseases. As the young boy or girl is now mostly self-dependent, it is quite necessary that, as immediate parental care is gradually withdrawn, a knowledge of the physiological value of foods should come into play. And it should not be forgotten that during all this time, *i.e.*, the second ten years of life, the bodily exercise should keep step with the mental education. Too often we meet the young so far from natural in their appearance that we exclaim: *Mens sana in corpore sano?*

Anent the prevention of non-microbic diseases I may say: To the person brought up strong, morally and physically, with clean habits and a pure mind, there is less danger of having the general diseases, except contagious, infectious, or inherited maladies. He will have learned to work, to eat, to sleep, and in short to live, healthfully. It greatly depends upon a man *how* he works, *how* he eats, and *how* he sleeps. I fully coincide with the opinion of authors on longevity, that *work* is the chief medium for obtaining a long, healthy life. It is a well experienced fact that people who keep in vigorous health while they are obliged to work hard, break down rapidly when their fortunes so change that they lapse into living *sine cura*. Physical resting of long duration may be called physical *rusting*. But, on the other hand, work can and will produce numberless diseases if overdone. Too often we meet with patients who are mentally overworked, worn out, and in need of general toning up. And here it is that the physician can prevent serious nervous diseases, mental diseases, the terrible habit of inebriety, the morphine and cocaine habits, and early death, by proper treatment, with rest, a suitable diet, and by impressing the patient with the idea that a person should work in order to live, and not live to work.

What to eat and how to eat, we are often asked; and it is surely no easy question to answer, as almost everybody is suffering more or less from the "national disease," dyspepsia. The cause of this is, *first*, overwork, a hurried life, due to the chase after the almighty dollar; *second*, the faulty kitchen.

Our duty, consequently, is to instruct the patient, as well as the public in general, to eat slowly. It is also our duty to instruct them how to cook tasty delicacies suitable for an imperfect digestion. A good physician must be also a good cook. I am of the opinion that many diseases can be prevented by a good table, and, furthermore, that there would be no cause for a "Keeley cure" if we could have better cooking. It does not depend upon what is cooked, but how it is cooked. It is not necessary for me to say that immoderate and intemperate drinking, not alone of alcoholic but also of non-alcoholic liquids, is just as injurious as immoderate and intemperate eating is.

"*The brother of death*": Strange as it may appear, the public and even physicians attach too little importance to this great regenerator of life. Speaking from a prophylactic standpoint, it is *a priori* necessary to have the location of the bedroom, if practicable, so arranged that the windows will face the south or east side; the windows should be large in order to admit the sunlight during the day. Large, dark, and heavy curtains, as well as unnecessary furniture, and especially carpets, should not be allowed in the bedroom. Many diseases are also contracted by persons sleeping on bedsteads too close to the floor. That the bedroom ought to be large and roomy, and well ventilated, goes without saying, especially when we consider that man spends more time in the bedroom than in any other room in the house. It is a curious, and by physicians a condemnable, habit of most of our people to sleep in pairs. Diseases are thus transmitted from one to another.

One sanitary rule to prevent disease is: Keep the head cool, the feet warm, and the bowels open.

In regard to the prevention of diseases due to a microbic cause, the doctor of today, with his microscopical and histological knowledge, is able in the case of contagious and infectious diseases to isolate and destroy the poisonous germ. He can go farther, and impart to the human body immunity from some diseases.

In pneumonia, experimental researches have established the undeniable fact that when the serum is taken from a pneumonic patient after the crisis, and injected into a rabbit infected with the pneumococcus, it has a curative power; and, furthermore, that the crisis in pneumonitis is, according to Klemperer,* nothing else than the result of an antidotal action on the poison generated in the febrile state. The toxic element is destroyed, but the coccus itself does not die; it does uot lose the capability of generating the poison; only in this body, where the antidote, "the antitoxin," is in circulation, the coccus is made non-toxic, inert. Ehrlich, in his researches on immunity, calls the crisis of a pneumonitic patient the "entry of immunity." Drs. G. and F. Kemperer, Leyden, Emmerich, and several others have produced immunity in rabbits against the infection of the pneumococcus by utilizing the blood serum of a pneumonitic patient, and some of them have even used the blood serum as a curative remedy in pneumonitic affections. This physiological antidote is called by Leyden and others the "pneumo-antitoxin." Dr. Nitter† states that this immunity, once produced, has an hereditary tendency. The experiment he made was on six young rabbits whose parents were made immune; one of the six injected with the poisonous mass died, the rest remained well after repeated injections with the virus. He has further found that the serum of the blood of infected animals does not cure pneumonia, *i.e*, destroy the pneumococcus, but affords a decided immunity against the disease.

In a similar way to the above, Behring and Kitasato‡ and G. and F. Klemperer have experimented, with the most satisfactory results on diphtheria and tetanus. The individual diphtheria and tetanus "antitoxin" was prepared and injected into infected rabbits and guinea-pigs.

These experiments, however, are of very recent years, and too little is known about them by the medical profession in general.

I believe we are justified in saying "that the time is near when all scientific problems

* Berliner Klinische Wochenschrift, Nos. 34 and 35, 1891,

† Centralblatt für Klinische Medicinische, No. ix, 1888.

‡ Deutsche Medicinische Wochenschrift, No. 49, 1890.

in this direction may be solved, and that all infectious diseases can be combated by producing immunity."

Bacteriological investigations and thorough microscopical work will and must bring on a new era in our noble profession.

Reedsburg, Wis.

MEDICAL PROPERTIES OF BROMO-LITHIA WATER.*

BY W. A. DIXON, M.D.

The late distinguished Prof. C. D. Meigs, of Philadelphia, said: "Nobody knows why one medicine acts thus, and another so; it is enough to know that ipecac makes you vomit and that jalap purges you."

Experience, trial, and observation of years with a remedy establish its reliability and character as a therapeutic agent. All medicines had a beginning to their use, and received general recognition only after endorsement by the writers and authors, who reach the practitioner by their pen.

They depend upon empirical facts founded on professional experience, as well as upon therapeutic applications based on the physiological actions of the remedies. The *why* that a remedy acts thus and so, is a metaphysical problem that the ordinary physician fails to undertake to solve, choosing rather to leave the task to the untiring professor, who submits each to strict physiological tests and sifts over the empirical facts until its precise action and use are definitely determined. The teachers and authors are not slow to consider facts as to any remedial agent, and give them due consideration.

This is my apology for inviting your attention to the medical properties of a mineral water as yet not well known to the medical profession. The Bromo Lithia Spring is located at Ripley, Brown county, Ohio, on the Ohio River, about fifty miles above Cincinnati. It was discovered in 1888, while drilling into the deep rocks in search of natural gas The drillers found, instead of gas, this water, at the depth of six hundred and fifteen (615) feet. They were experienced drillers, familiar with the deep rocks of New York, Pennsylvania, and the gas fields of Ohio, and their products. They were interested in the unusual find—a peculiar water in so dense a rock, that flowed out at the surface and rose in a pipe 83 feet higher—we do not know how much higher it might rise, being unable to further extend pipe.

For some time no value was attached to it as a mineral water possessing medicinal properties, and no effort was made to ascertain its composition. Circumstances like the following brought it to notice:

Mr. L., aged about fifty-five years, lived near the spring. He had been an invalid from chronic articular rheumatism for more than ten years. His joints were swollen, tender, and stiffened so that he walked but little and with the greatest difficulty and pain. He was unable to use his hands. His general health suffered greatly, and he had no prospect of being better. Remembering the mineral springs in his native country, Germany, he ventured to try the water. To the great surprise and delight of himself and friends, he rapidly improved. The swelling, soreness, and stiffness subsided. The man who had for more than ten years been missed from the street, and had resigned himself to the apparently certain issue, death, was seen again upon the street, gaining in flesh and strength, no longer stiff and limping, but returned to his former vigor.

This wonderful circumstance spread greatly, and hundreds suffering from rheumatism repaired to the water for relief, and were it practicable to relate their experience it would seem more like a fairy tale than truth.

A lady, Mrs. W., aged about 46, was ill from Bright's disease. Her condition was critical. She had œdema of the lower extremities, ascites, effusion within the thorax, and a large percentage of albumin in the urine. Her physician, Dr. J. G. Winters, despairing of her recovery, advised the use of the water, and watched its effects daily. The urgent symptoms of dyspnœa and uræmic poisoning modified quickly, the flow of urine increased, the albumin diminished, the effusions were gradually taken up, and recovery established, with the help of no other remedy. She remains in good health to the present.

* Read before the Ohio State Medical Society, May 6, 1892.

The news of this case led a large number affected with kidney and vesical troubles to try the water. The results observed prove the water palliative in a large number of cases, and curative in a sufficient number to win the respect and confidence of physicians.

Mr. J., aged about 60, had diabetes mellitus, well pronounced. The specific gravity of his urine was 1.034 and upwards. Repeated tests showed the presence of sugar. He had besides all the concurrent symptoms. He drank the water, and obtained such relief that he told the story of his recovery everywhere, and led many more to use it advantageously.

We now felt warranted in having the water analyzed to discover what ingredients it contained that would produce the results above related. A specimen was furnished to Prof. Chas. T. P. Fennel, of Cincinnati, a chemist well known to the profession, who made a quantitative analysis, and reported the presence of calcium and magnesium sulphates; calcium, magnesium, potassium, and sodium chlorides; calcium, magnesium, and lithium carbonates; sulphuretted hydrogen, and free carbonic acid gas in large quantities. The amount of lithium carbonate was eight and eight-tenths grains to the U. S. gallon. The quantity of carbonate of lithium being extraordinary and associated with the other valuable medicinal constituents, brought the water to the notice of physicians of prominence and many people familiar with mineral waters and their composition. The more it was observed, the more it became apparent that its behavior was exceedingly peculiar and its properties unique and extraordinary and unlike those of any other known American water. When fresh it is perfectly transparent, colorless, and sparkling. Its taste is saline, slightly alkaline, bitterish, leaving an agreeable farewell. Because of the gaseous constituents, the water is markedly exhilarating. When bottled, it remains unchanged so long as the bottle is corked. On exposure to the air, it becomes quite yellow, then gradually whitish and turbid in appearance, and finally clear as crystal. When put in barrels, it requires a long time for this process to complete. This peculiar action of the water seemed to settle its fate. No one seemed able to understand its changes. It was so utterly unlike all other waters handled by the druggist that he could not venture to explain its action.

At this time no thought was entertained of the water forcing itself into recognition as a medicinal agent of demonstrated value. Reports were being daily received from physicians and others, attesting its worth in rheumatism, gout, derangements of the kidney and diseases of the bladder, its power to dissolve renal calculus, and its beneficial effects in chronic syphilitic and all lithæmic conditions.

These reports led us to suspect that this very extraordinary chemical conduct of the water was the key to its wonderful medicinal action, and stimulated further search into its chemical character. Prominent physicians who had prescribed the water were well pleased with the certainty of its action, but could not understand its chemical deportment. Dr. George E. Walton, author of "Mineral Springs of the United States and Canada," and well informed upon all mineral waters, after investigation wrote: "The water reveals peculiar and extraordinary properties such as I have never met with before. These properties are not met with elsewhere in this country. Two or three springs similar are noted in Europe – Enghoem and Cadeac, France. I do not doubt this water will prove applicable to a wide range of diseases. You may be assured the water is one which should not be neglected."

It was suggested that Professor Karl Langenbeck, Professor of Chemistry in the Miami Medical College, would be able to unravel the chemical action. He began its analysis in February, 1889, and worked upon it until May 15th following. In response to inquiries as to the difficulties and delays in the work, he replied that the work was very puzzling, and that he was reminded that the water bore a close comparison with that of Stachelberg, in Switzerland. The Stachelberg Spring was first described in J. J. Schenchzer's "Hydrographica Helvetica," which was published in 1717, and has been known as a medical water for certainly two hundred years. In 1812 it was the subject of a special brochure by Dr. Johann Martin, of Glarus, who pointed out its peculiarities—which tempted Prof. C. F. Kielmeyer of the

University of Tübingen to attempt its analysis and explain its properties from the chemical characters found, and as they were then understood.

In 1834 Dr. Theodore Simmler, then an instructor in the Polytechnic School at Zurich, saw that the great discoveries in chemistry, made since the date of Kielmeyer's celebrated effort, had not been applied to the analysis of the alkaline hepatic waters—the character of which was not understood, in spite of Kielmeyer's work—in the light of advanced chemical knowledge. He therefore undertook a new analysis of the Stachelberg Spring, and the methods devised by him in this very puzzling work have held good in the examination of this class of waters to the present day. Working in the Zurich laboratory, myself, during the year 1882, I became familiar with Simmler's work and the Stachelberg water, as the resort is in the valley of the Linth in Canton Glarus, not far distant from Zurich, and popular with the Zurich people.

Medical experience with it extends over so long a period, and it has played so important a part in stimulating advance in the chemical analysis of complicated waters, that it is well known to chemists who are familiar with the history of this subject, and it should be known to physicians generally, now that a similar water can be obtained in abundance which falls heir to the extensive experience that has been made with it. The resemblance lies chiefly in the alkalinity, the character of the sulphur compounds, their change from sulphides to sulphates, on exposure to air, the presence to monosulphides, hydrosulphides, and polysulphides along with the normal sulphides and the presence of a large amount of lithium, to which in a large measure its medicinal value must be ascribed, and which the Ripley water shares with it. The difference lies in the small amount of sulphates in its fresh state, and the presence of the bromine, in the Ripley water.

Dr. Simmler submitted the following analysis:

Each wine pint contains:

Silica	0.2030	grains.
Alumina	0.0085	"
Ferrous sulphide	0.0052	"
Ammonium sulphide	0.0775	grains.
Calcium sulphide	1.8633	"
Magnesium sulphide	2.4089	"
Calcium hydrosulphide	0.3230	"
Magnesium bromide	0.0657	"
Sodium chloride	66.3453	"
Potassium chloride	2.5950	"
Lithium carbonate	1.1050	"
Free sulphuretted hydrogen	4.35	cub. inches.
Carbonic acid gas	8.07	" "

The quantity of lithium carbonate is the same in each analysis, eight and eight-tenths grains to the gallon.

Prof. Dr. Roberts Bartholow, of Philadelphia, took a case in bottles and a barrel of the water for trial. He wrote that he was much pleased with the results of its use; that it acted efficiently in uric acid diathesis by forming chemically the urate of lithia, which is easily excreted in the urine. He also gave great credit to the numerous sulphur compounds held in the water in the form of the normal sulphides, the monosulphides, the hydrosulphides, and the polysulphides, changing into sulphates, and believed the chemical action as observed continued during ingestion, therefore exerting alterative and reconstructive changes that favorably modified morbid processes in the liver, kidneys, and glands of the stomach and bowels, rendering it a most valuable medicinal agent. Before he completed his investigations he became ill, and we were deprived of an authentic report from him.

By this time many reports from physicians prominent in the profession were received, concurring in Prof. Bartholow's observations and establishing that in lithæmic conditions where the tissues are in a state of irritation from the retention of excrementitious matter—where fugitive pains, irritable temper, loss of appetite, and insomnia are present—and the urine full of urates, the action of the lithia in the water changes the condition; and where the salicylates and so on fail to ease the pains, opiates, chloral, etc., fail to bring sleep, and where pulmonary troubles, paretic dementia, and heart failure seemed imminent, and no improvement was made under the use of the means hitherto employed, the water, by its chemical action in uniting with the urea, renders the latter perfectly soluble and easily carried off in the urine, thereby affording relief and effecting a cure.

Numerous reports of cases of this kind sustain the theory of its chemical and physiological action as a solvent and eliminant of urea, the presence of which is the cause of so many obscure, chronic, painful affections.

The last and probably the most important medical property of this water, to which your attention is called, is its action in dissolving renal calculi. This property is attested by reports of many cases, a few of which only I will here mention:

Case 1.—Dr. J. O. Jenkins, of Newport, Ky., reported a case in the Lancet-Clinic of Dec. 6, 1890, which, after using the water some time, passed at one sitting 5 ounces of sand; some months afterward, at one sitting, 3½ ounces of sand; and smaller amounts at other and frequent times. The Doctor believed that as a result of the action of the water "the outer layer of a large calculus in the kidney (for the stone was not in the bladder) was dissolved, and the internal and harder as well as older portion would require the continuance of its use to break it up." The Doctor afterwards reported "continued improvement in the case, with unwavering faith in the water."

Case 2.—Mr. W. B. T., of Portsmouth, O., complained of uneasy sensations referable to the urinary organs. He had no intimation of the cause. From curiosity, perhaps, he drank of the water. After a few days' use he was seized with severe renal colic, which was relieved only by hypodermatic use of morphia. He continued the use of the water, and was a second time the victim of renal pain. This time his physician accused the water of the mischief and condemned its further use. In a few days more a third attack supervened. A calculus reached the bladder, entered the urethra, and was removed. The water had got in its work, settled the diagnosis, and gave relief not experienced for a long time previously.

Case 3.—Mr. F., aged 60, a patient of Dr. J. C. Winters, of Ripley, suffered from an irritable state of the urinary organs. No suspicion of renal calculus was entertained. He drank the water, and it was not long until the Doctor was called to remove a large calculus engaged in the urethra. Recovery seems to be complete.

Case 4.—Capt. K., of the Big Sandy Pocket Co., drank the water on account of vague abdominal pains and urinary discomfort. In a short time he was seized with violent renal colic, which he had never had before. His physician accused the guilty water and advised its discontinuance, but the water had already begun the solution of the calculus, which was reduced to a size that would permit its entrance into the ureter and exit by the urethra. His relief after the passage of a large stone was perfect.

Case 5.—Mr. H., of Flora, Ill., was advised by his physician, Dr. E. B. Elrod, to drink the water for an obscure affection referable to the kidneys. He came to the spring, and drank of the water probably ten days, when he was seized with the most violent renal colic. In a few hours he passed several drachms of sand, and for several months continued to pass this debris. He was advised finally to cease using the water or it would kill him. He afterwards returned to the spring to use the water, realizing what it had done for him. He remains free from renal pain to the present.

These are but a sample of a large number of reports of like character received. We summarize, from observation, trial, and reports, the following: That the water is not a table water, but medicinal. It is not pleasant to the taste, yet many become fond of it by use. It renders the bowels soluble, but it is not a cathartic. It does not act violently upon the kidneys to set up nephritis. It is a solvent of urea and of the various morbid deposits from the urine. It is a bile-solvent and acts well in hepatic affections, especially cirrhosis. It is an eliminant and reconstructant. It is an antizymotic, antiseptic, antituberculous agent of no mean value, because of its calcium sulphides and other sulphide and sulphur compounds. Some mineral waters act as distilled water only, by holding in solution no agent whatever. They must be used in large, drenching, flushing, and flooding quantities to take up the salts and wash them out. This water acts chemically, physiologically—uniformly, invariably, and infallibly—in the direction of the *modus operandi* of its composite ingredients, requiring no flooding, no sewerage process, nor taxing the kidneys to diseased tension to produce appreciable results. It never

spoils nor loses its medicinal properties. The bromide and lithium remain constant.

As "ipecac vomits and jalap purges," so bromo-lithia water excretes urea, dissolves renal calculus, arrests secretion of albumin, and dries up the mysterious sweet fountain of diabetic urine.

Ripley, O.

FEEDING THE INSANE.

The following communication, addressed to the Hamburg agents of the Mosquera-Julia Food Co., is self-explanatory:

THE ROYAL PSYCHIATRIC CLINIC, /
BRESLAU, June 24, 1892. \

The Mosquera beef meal has been used for several months in the Royal Psychiatric Clinic at Breslau, which is connected with the Municipal Insane Asylum.

For the artificial feeding of the insane who refuse nourishment, we ordinarily use in this clinic milk with infants' meal, or cacao with eggs and sugar. In cases where meat is therapeutically indicated, especially with the anæmic and cachectic insane, preference has long been given to Mosquera beef meal over other familiar beef preparations, on account of its convenience and economy.

We have found it most desirable to add the beef meal to a thick porridge or gruel of oatmeal or leguminosæ, rendered appetizing with salt and meat broth, or beef extract. For culinary reasons one or two eggs may be stirred in. In feeding with the sound, we usually consume each time a quantity of 1000 to 1500 c.c., using three teaspoonfuls, or about 25 grammes, of beef meal.

Where food is absolutely refused, feeding is resorted to two or three times daily.

When a patient expressed a pronounced dislike for meat-foods, the beef meal was well disguised by a sweetened soup of cacao and Nestle flour. It often happened, however, that the patients were more pleased with the piquant savor of the beef soup than with the meal soups prepared with milk and sugar.

Feeding with beef meal renders possible a closer approximation to the normal process of nutrition, and affords an opportunity, where refusal of food is long persisted in, to vary the nutrients presented—fulfilling thus a physiological desideratum.

The beef meal has also been prescribed as a dietetic agent in other diseases, and in the majority of cases where the proper seasoning was not omitted it was readily taken.

(Sgd) PROF. DR. WERNICKE.
(Sgd) DR. KEMMLER, Ass't Physician.
[SEAL.]

Correspondence.

WAYNE COUNTY MEDICAL SOCIETY.

At the regular meeting of this Society, Oct. 28, 1892, Dr. R. H. Honner read a paper on "Treatment of Typhoid Fever" (see MEDICAL AGE, Nov. 25).

Dr. O. P. Eaton: Believed in the diet for typhoid fever cases.

Dr. James Newell: Does not believe any doctor can diagnose a case of typhoid at first call, and thinks that he who will thus assert only needs a further experience to have a change of mind. Thinks that the abdominal eruption is the only positive diagnostic lesion. Don't give much medicine. Afraid of the phenol preparations. Gives milk; if it passes through intestines undigested, gives with it pancreatin. In diarrhœa gives salol, but prefers cupric sulph. in the form of the pil. saponis. Turpentine in tympanitis is good.

Dr. Richardson, New York: Thinks favorably of the cold baths, as he has seen them given in the New York hospitals with good results.

Dr. J. E. Westgate: Had four patients in one family with the fever; all recovered. One had a temperature for four days of 105 F.

Dr. J. J. Mulheron: We have three requirements in the treatment of this fever: *first*, secure antiseptic intestines by HCl, salol, salicylate of bismuth, etc.; *second*, relieve the kidneys and prevent uræmic poisoning, for which coffee is excellent, and a good heart-tonic; *third*, strengthen the heart.

Dr. E. B. Smith: In perforation, the only hope is an operation, which I will do on the first case that comes in my hands.

Dr. O. S. Armstrong: Gives grey powder, ¼ grain, with lactopeptine and bismuth. Cold coil on abdomen is attended with the best results. In delirium, sulphonal is good.

Dr. J. J. Mulheron presented, for a specimen, a uterus with fallopian tubes and ovaries. The patient had a cauliflower growth filling up the vaginal tract, which was removed. This stopped for a brief time the hæmorrhage that had been persisting for several weeks. The hæmorrhage again starting up, the uterus was curetted; no results. Then, with Dr. Stoner, removed the

organ per vagina. The forceps were removed at end of forty hours, as temperature had gone up to 104°, after which it went down to normal.

Dr. Mulheron also reported a case of burn of third degree, over all of arm, on child fourteen months old, where on the fourth day the brachial was found cut off. Amputation; death.

E. B. SMITH, M.D.,
Secretary.

PRELIMINARY ANNOUNCEMENT OF THE NATIONAL ASSOCIATION OF RAIL WAY SURGEONS.

This Association embraces the United States, Canada, and Mexico. Its sixth annual meeting will be held at Omaha, Neb., the last Wednesday, Thursday, and Friday of May, 1893.

The general subject for discussion will be: "Injuries of the Cord and its Envelopes Without Fracture of the Spine."

1. History, by Dr. Geo. Ross, Richmond & Danville Railroad.
2. Anatomical Landmarks, by Dr. Jabez N. Jackson, Wabash Railroad.
3. Physiology of the Spinal Cord, by Dr. A. P. Grinnell, Central Vermont Railroad.
4. Experimental Research, by Dr. B. A. Watson, Pennsylvania Railroad.
5. An Experimental Study of Spinal Myelitis and Meningitis, by Dr. Geo. A. Baxter, Chattanooga Southern Railroad.
6. The Clinical Aspects of Spinal Localization, by Dr. Nicholas Senn, Chicago, St. Paul & Kansas City Railroad.
7. Diagnosis from the standpoint of the Neurologist, by Dr. C. H. Hughes, Missouri Pacific Railroad.
8. Pathology and Pathological Anatomy, by Dr. Samuel C. Benedict. Richmond & Danville Railroad.
9. Prognosis, by Dr. Samuel S. Thorn, Toledo, St. Louis & Kansas City Railroad.
10. Treatment, by Dr. W. B. Outten, Missouri Pacific Railroad.
11. Medico-legal Aspects, by Judge J. H. Collins, Baltimore & Ohio Railroad.
12. Statistics of the amount of Money paid by the Railroads of the United States during the last Ten Years for Alleged Injuries of the Spine, by Dr. F. K. Ainsworth, Southern Pacific Railroad.
13. Clinical Report—(1) From a Medical Aspect—(*a*) permanent injuries; (*b*) alleged injuries. (2) From a Legal Aspect—(*a*) settled with suit; (*b*) settled without suit; (*c*) miscellaneous. By Dr. Geo. Chaffee, Long Island Railroad.

E. R. LEWIS, M.D., Sec'y.,
Kansas City, Mo.

C. W. P. BROCK, M.D., Pres't.,
Richmond, Va.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

B. W. PALMER, A. M., M. D., Editor.

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Editorial.

ADVICE TO MEDICAL STUDENTS.

The course of study is now fairly commenced in all the medical schools of the country. For rather more than a month, students have been listening to lectures and getting accustomed to habits of application. Already their primary or final examinations loom up before them in the distance like some frightful ogre. Some, with a grave sense of their deficiency, are putting forth strenuous efforts; some, conscious of their strength, have prizes and honors in view; others, unfortunately, are indifferent, and are disposed to shirk lectures and study.

If THE MEDICAL AGE may venture to give any advice to these future physicians of this country, it would be this:

Those who have matriculated without any proper realization of the arduous nature of the studies on which they have entered or of the responsibilities which they have incurred, have made a great mistake and will be sure to meet with failure. Those who design to sow "their wild oats" had better quit the medical school and devote themselves to *agriculture*. The medical school is no place for shirks, triflers, or rowdies.

To those who are willing to work and ambitious of doing well, we would say: There is no nobler field for patient study and for honest, earnest, beneficent effort. The profession of medicine is now coveted by the most gifted minds of the age, and the foremost men in medicine and surgery today would have led the march of progress, of liberty, and of civilization in any age of the world. But while it is an honor to belong to the great army of enlightened physicians, the qualifications necessary to success

are higher to-day than in any previous period of the world's history. Therefore every student who would attain to honorable distinction must work. Persevering, untiring labor is necessary to master in three years or four years the various branches of medical study in which a physician ought to be proficient before he attempts to treat disease. The past twenty-five years have added many new departments to the curriculum, such as the study of the microscope and of histology, the use of the ophthalmoscope and laryngoscope, practical chemistry, gynæcology, and bacteriology. A thorough knowledge of medical physics, and some knowledge of botany, biology, and of pharmacology (much more than was formerly taught), is now required. Consequently the medical student cannot have much spare time; he must make up his mind to forget whist, backgammon, and chess, and even neglect novel-reading, the theatre, and social parties. Such recreation as is taken should be taken with the view of better fitting the student for his work. And for this reason bodily exercise must not be neglected. A long walk out in the open country will, when the brain is jaded, do much to promote zest for study and quicken the memory. Gymnastics constitute a mode of exercise in which students ought to indulge an hour or two every day, and fortunately most institutions of learning are now provided with gymnasia.

Some have recommended billiards as a good exercise, combining bodily exertion with amusement. A billiard-room is a useful addition to a gymnasium.

However pressed by class recitations and lectures, and however great the need of revising and reviewing the lecture-room notes of the day, the student must not sacrifice to study the hours needed for sleep. Too many err by depriving themselves of suitable sleep. Time is wasted which is devoted to cramming when the brain is tired. One can accomplish as much in one hour when the brain is fresh and rested, as in two or three hours when the attention flags and thoughts come slowly and painfully.

The more methodical a student becomes, the better. So much time every day to be devoted to class work and study; so much for exercise, for meals, and for recreation; so much for sleep. Every student will soon find how much brain work he can daily accomplish with profit, and how much amusement, exercise, and sleep are necessary to keep him in trim; and only the most general rules are applicable to all cases. He will also realize the importance of a nutritious and digestible (not excessive) diet, and of abstinence from stimulants and any large use of tobacco. Experience has abundantly shown that more and better brain work is done without the help of narcotic or alcoholic stimulants.

We cannot forbear exhorting students to cultivate the habit of making original observations, and to aspire, by original work, to be discoverers and pioneers—independent investigators, rather than servile copyists of other men's methods and ideas. There never was a time when there was greater demand for original research, and when invention and discovery brought such a premium; and young men who have the zeal and ability for original work will find ample encouragement and a broad field.

While, then, we would counsel medical students to pitch their mark high, we would also urge them to keep within the limits of legitimate medicine. Whatever hardships and deprivations you may have to undergo, keep out of quackery. Though charlatans may flaunt before you in purple and fine linen, and you may be too poor to own a team—do not descend to what the profession regards as dishonest and disreputable means of making money. Better keep your self-respect and that of your fellow alumni, professors, and the great body of your *confrères*. Your duty is to help raise your fellow-men to a high plane of morality and intelligence where quackery can no longer thrive and flourish because the soil has become uncongenial. For this end legitimate medicine is now laboring, and every graduate should lend a helping hand.

Finally, although the profession is overcrowded, there will always be room for superior merit and excellence.

A NEW PROFESSORSHIP IN JEFFERSON MEDICAL COLLEGE.

This revered and honored institution, though it exceeds many of its contempo-

raries in age, is not excelled by them in vitality or progressiveness. It is gathering to its faculty staff the brighter lights of the workers in the various fields of medical and surgical research.

The latest acquisition is that of Dr. G. E. de Schweinitz, who, at a meeting of the Board of Trustees of the Jefferson Medical College held on Wednesday, Nov. 30, 1892, was elected, on the unanimous recommendation of the faculty, Clinical Professor of Ophthalmology.

At the time of election, Dr. de Schweinitz was Professor of Ophthalmology in the Philadelphia Polyclinic, and Lecturer on Medical Ophthalmoscopy in the University of Pennsylvania.

MEDICAL PRACTITIONERS IN MEDIÆVAL TIMES.

M. Alfred Franklin has recently published a book* in which he discusses the details of private life in Paris in the olden time, and incidentally the mediæval Parisian doctor.

The British Medical Journal, Nov. 26, 1892, gives an interesting *résumé* of the characteristics of this old-time physician, which we have pleasure in giving our readers the benefit of.

It appears that in the thirteenth and fourteenth centuries the profession was not at all overcrowded in Paris, for in 1292 there were only six legitimate practitioners in Paris, while more than a century later, in 1395, the number had only risen to thirty-two. What the population of Paris was during that period it is impossible to say with any approach to certainty. Unlicensed practitioners, it is needless to say, were as plentiful as blackberries; from official records M. Franklin is able to give the names and addresses of thirty-eight quacks, masculine and feminine, who practiced on the limbs and lives of His Most Christian Majesty's lieges in 1292. One of these, a bonesetter named Lorenz, who had his brass plate, or its thirteenth-century equivalent, in the Rue aux Provoires, made a "professional" income of 50 livres, which M. Franklin estimates at about 13,000 francs. Many a member of that self-confident fraternity at the present day would turn up his nose at Maitre Lorenz's comparatively humble income, but his earnings were very large for his day. Even as late as the end of last century, there was plenty of elbow room in the medical profession in the French capital, authentic records showing that while in 1791 the population was 593,070, there were in 1789 only 172 practitioners of medicine.

Comparing these figures with those for 1891, it will be seen that while the population during the intervening 100 years rose to 3,141,595 – that is to say, increased fivefold— the number of doctors increased to 2,200, or twelve times the number practicing in 1791. These statistics, taken in combination with similar returns in other countries, seem to show that one is fully justified in speaking of medicine as the profession of the future. If doctors continue to increase and multiply as they are now doing, we are within measurable distance of a time when the profession will be reduced to a condition similar to that of the inhabitants of the famous island where the natives earn a scanty subsistence by taking in each other's washing.

M. Franklin has also something to say on the question of titles. He points out that the title of "Doctor" is not met with earlier than the fifteenth century. Up to that time the recognized title was "Master in Medicine," and "Master Regent" in the case of academic teachers.

With regard to inaugural theses, M. Franklin states that the first mention of them occurs in 1395, though it was not till Feb. 17, 1589, that a thesis was printed for the first time. The titles of these old dissertations are often interesting as reflecting the form and movement of the medicine of the time. Thus we find such questions discussed as: "Is the Necessity of Death Innate?" (1572); "Is Air more Necessary than Food and Drink?" (1589); "Should a Lovesick Girl be Bled?" (1639). In 1576 a precursor of Mr. Romanes debated whether the fœtus resembled the father more than the mother; in 1622 a thesis was presented on the superior wholesomeness of water as compared with wine; and in 1643, by way probably of reëstablishing the equilibrium of opinion, one bearing the unedifying title, "Is it Wholesome to get Drunk once a month?" A bold bad man in 1646

*La Vie Privée d' Antrejois, Paris, Plon. 1892.

argued that woman was an imperfect work of Nature. Canon Harford and the St. Cecilia Guild will be interested to hear that the question, "Is Music Efficacious in Diseases?" was propounded in 1624. "Is Libertinism a Cause of Baldness?" is a question asked in 1662, which, it may be hoped, for the credit of a considerable proportion of the *jeunesse dorée* of the present day, was answered in the negative. Such a title as "Ought Literary Men to Marry?" (1745) shows that Andrew Lang was not the first to discuss this interesting question. The history of medicine, or at any rate of the revolution of medical opinion, in the course of the last three or four centuries, might almost be written from the titles of the inaugural dissertations presented during the period.

THE ANTISEPTIC DROPPER.

George M. Gould, A.M., M.D., in the Medical News, Dec. 3, 1892, describes a new device for keeping droppers or medicine pipettes clean.

It is to combine the dropper and the glass-cork in one piece of glass. The long fine point of the dropper, straight or curved, and of any length desired, or according to the bottle height, is made the same as the best style of the droppers in common use. The bulbous or tubular enlargement of the dropper is made of a sufficient thickness of glass to admit of its being ground so as to fit the neck of the bottle accurately, just as the ordinary glass-stopper does, and is of course used in place of any other stopper. This bulbous enlargement extends far enough above the lips of the bottle to serve as a grasping-place for the finger and thumb, and upon this is fitted the rubber bulb exactly as is the common dropper. In this way cork and dropper are united.

By changing the shape of the rubber bulb, so that it shall be round or flattened instead of oblong, only the index finger is used to compress or depress it, and thus expel the solution, while the thumb and second finger hold the dropper below. The rubber bulb can be made of suitable size to suck up only the single drop, or a few drops, as desired.

Upon the top of the rubber bulb may be written the number of the bottle, etc.

Book Notices.

The following review, by the distinguished Professor Rudolf Kobert, is an indication that scientific work, whatever may be the nationality of its origin, is recognized and appreciated all over the civilized world.

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THE PHARMACOLOGY OF THE NEWER MATERIA MEDICA. George S. Davis, Publisher, Detroit, Michigan. 1892.

Bearing this title, we have before us a large octavo volume, comprising 1307 closely printed pages, and containing numerous botanical and pharmacognostic figures and plates. The author is not mentioned, the work "being the results of the collective investigation of new remedies, as conducted under the 'Working Bulletin' system, properly arranged, classified, and indexed." According to this modest claim, the work is a compendium of information respecting the action of new remedies, which have been collected by the well-known "world-firm" of Parke, Davis & Co., of Detroit, Mich., in all the various parts of North America, and pharmacognostically and chemically investigated; and on these drugs the firm has caused competent scholars to compile all existing data from the literature at its command. The book is accordingly a kind of scientific trade report, but upon so grand a scale that it will remain for many years a source of information to us on this side of the ocean, respecting new American remedies. In all, 131 substances are quoted, the greater number of which are plant-parts. For example, Adhatoda vasica, Cyperus articulatus, Ailanthus glandulosa, Carum Copticum, Laurus persea, Alstonia constricta, Alveloz milk, Anagallis arvensis, Anhalonium Lewinii, Areca nuts, Thuja occidentalis, Momordica balsamina, Musa sapientum, Statice brasiliensis, Polymnia Uvedalia, Viburnum prunifolium, Fucus vesiculosus, Asclepias curassavica, Arctium Lappa, Garrya Fremontii, Copernicia cerifera, Jacaranda procera, Picramina, Simaba Cedron, Cereus grandiflorus, Sycocarpus Rusbyi, Gynocardia odorata, Turnera diffusa, Piscidia Erythrina, Alstonia scholaris, Euphorbia pilulifera, Grindelia robusta, Dipterocarpus turbinatus,

Helianthella tenuifolia, Strychnos malaccensis, Ostrya virginica, etc. By these examples, selected at random, it will be seen that the work treats of numerous remedies of which the European physician has no suspicion. But in order to render the book available to the latter, a therapeutic index has been added, which gives ready access to the contents. The exhaustive manner in which some of the remedies are treated is shown by the devotion of 337 pages to coca and cocaine. So far as the references to European literature are concerned, in some cases they are quite inadequate, as, for example, with ergot and Asclepias curassavica. This, however, is not of moment, as we only desire to learn from the book the prevailing American ideas respecting the individual agents. In conclusion, we particularly commend to the physicians of Russia one of the warmly endorsed American remedies, viz., Xanthium strumarium, as it is an ancient Russian folk-remedy.—*St. Petersburger Medicinische Wochenschrift*, Oct. 24 (Nov. 5), 1892.

New England Magazine for December.

The December number of the New England Magazine is a very varied one, and will afford interest to all classes of readers. It appeals to all sections of the country, and contains specific contents for those musically, literarily, sociologically, artistically, or poetically inclined. The number opens with a beautifully illustrated article descriptive of "The Builders of the Cathedrals," by Marshall S. Snow. Charles Lewis Slattery contributes a very suggestive article, "Can Religion be Taught in the Public Schools?" Another article of a similar character is Arthur May Mowry's excellent exposition of "How Civil Government is Taught in a New England High School." William Ordway Partridge, the poet-sculptor, writes very intelligently and interestingly of "The Outlook for Sculpture in America." Major Alfred F. Sears, an American civil engineer who has spent many years in South America, writes instructively about "The Republic of Peru." John White Chadwick pays a tender tribute to Whittier in a poem, "A Thought of Whittier." Walter Blackburn Harte writes about the homely poetry and aims of Sam Walter Foss, the popular New England dialect poet. Edwin D. Mead devotes his Editor's Table to Whittier's prose writings. Willis Boyd Allen contributes a bright short story, "Pretty Miss Barneveld." P. McArthur, well known to the readers of Life, Puck, and the Judge, has a delicate and clever piece of verse, "A Refrain." Harry Romaine and Robert Loveman also contribute good verse, "The Tricks of Fate" and "In Lighter Vein," respectively. Hilarion Michel has a well written article, "A Bird's-Eye View of the Sahara," in which he tells much that is novel and interesting about that little-known region. It is a good number for holiday reading.

A Text-Book of Nervous and Mental Diseases. By Landon Carter Gray, M.D., Professor of Diseases of the Mind and Nervous System in the New York Polyclinic. Octavo, 687 pages, elucidated with 168 illustrations. Lea Brothers & Co., Publishers, Philadelphia. 1892.

This is a modern presentation of the existing knowledge of the diseases of the nervous system, divested of unnecessary prolixity and expressing clearly the views of the author as to the recognition and treatment of this most prevalent class of affections. American physicians will find in it a clear statement of a department of medicine of peculiar importance to them. It would have been comparatively easy to gather abundant literature upon a subject of such enormous growth; but to weigh, select, and condense, requires exceptional qualities of mind. Dr. Gray has undertaken to provide students and practitioners with a compact volume containing a working knowledge of neurology, space being principally devoted to the diagnosis and treatment of all diseases belonging to this department. The work will occupy a high position as an authority for the physician, and will be popular as a text-book for the student.

All Around the Year 1893. Entirely New Design in Colors by J. Pauline Sunter. Printed on heavy cardboard, gilt edges, with chain, tassels, and ring. Size, 4¼ × 5½ inches. Boxed.

The "All Around the Year" calendar which Mrs. Sunter sends out this year is as

charming a piece of work as anything she has done. Like its predecessors, it is printed on heavy cardboard, gilt-edged, with chain, tassels, and ring, and is of convenient size. The designs are fresh and delightful, quaint and picturesque little lads and lassies issuing in each month with just the right words and in the most charming attitudes, while the lines on the cards combine to form a very pleasing love story. Done in several colors, one can scarcely imagine anything more graceful than the twelve cards, each bearing the dainty design which includes the month's calendar as a part of the picture. The cover shows a pretty little Miss watching a Cupid "warming his pretty little toes" at an open fireplace, while on the last page this same Cupid (or his fellow) is playing sweetly, "Good-by, my Lover, Good-by."

TALES FROM TOWN TOPICS, No. 6.

The holiday edition of "Tales from Town Topics," which is No. 6 of the series, shows an increase in size, and contains, in addition to the collection of stories, poems, and witticisms culled from the well known journal itself, an original novelette, 75 pages in length, entitled "The Sale of a Soul." The novelette is by C. M. S. McLellan, and it relates a story of metropolitan life in which a beautiful girl is raised from a Bowery saloon to the highest place in New York and London society. In its characters and local color "The Sale of a Soul" is highly entertaining, while the literary *mélange* gathered from Town Topics is of the usual bright and graceful description. Town Topics is published at 21 West Twenty-third street, New York.

D. Appleton & Co. have established an office in Detroit for the exhibition and sale of all their medical subscription works, at 88 and 90 Griswold street, where Detroit physicians may obtain them.

Among their latest issues is a Treatise on Diseases of the Rectum, Anus, and Sigmoid Flexure, by Joseph M. Matthews, M.D., Professor of Principles and Practice of Surgery, and Clinical Lecturer on Diseases of the Rectum, Kentucky School of Medicine, which will be reviewed in the next number of THE AGE.

Notes and News.

The Perils of Electric Lighting.—

The introduction of electric lighting is, thanks to the solicitude of the Legislature and the skill enlisted in the service of the Board of Trade, an industry which, its magnitude considered, has been attended hitherto with singularly little loss of life and personal injury. The inquest held on Monday last by Mr. Drew upon the body of a workman employed by the House-to-House Electric Lighting Company, who had met his death by incautiously "short-circuiting" a lighting current, disclosed no new and unsuspected danger and gave no occasion for regret except for the human frailty which led a young man to incur needless risk by neglecting the most elementary precautions in the conduct of his work. It would seem that in this case the paradox is true that if the electric lighting current were less dangerous than it is, people would handle it with greater circumspection than they do. A Ruhmkorff coil deals a smart blow if inconsiderately touched, and nobody does touch it inconsiderately, although it always, when in action, presents numerous surfaces which are highly charged with electricity. But a lighting main is apt to kill, and is therefore insulated with the greatest and most effective care. Hence accidents are rare, so rare that they cease to make an impression, and a heedless workman manipulates the mains with bare hands as if they were as harmless as kittens. A pair of india-rubber gloves would make him quite safe, as he perfectly well knows, but he prefers to take the small and inconspicuous risk and to have his hands unshackled for his work. It is matter for rejoicing that his confidence is not often misplaced, but when it is the consequences are lamentable, for a 2,000-volt current is a foe that strikes in silence but seldom strikes in vain.—*Lancet*, Nov. 19, 1892.

The Legality of Bequests to Medical Attendants.—

In England one hears occasionally of a professional brother having his grief at the loss of a profitable patient by death attenuated by a more or less important legacy bequeathed

him by the deceased. In France such a compensation is, in most cases, out of the question, for, by the terms of provision 909 of the Civil Code, a practitioner is debarred from inheriting from a patient whom he attended during his last fatal illness, provided the will containing the bequest was made during the said illness. It was, however, ruled by the Court of Cassation in 1834 that the above law did not apply to a doctor called merely in consultation. — *Medical Record*, Nov. 26, 1892.

Physicians Should Have the Right of Way.—

The Medical Record says New York physicians have the right of way in accordance with the following city ordinance:

"SECTION 1.—Section 1 of Article I of Chapter VIII of the Revised Ordinances of 1880 is hereby amended by adding thereto at the end thereof the following words, to wit: Physicians having a police permit, as hereinafter provided for, shall also have a like right of way in the streets, and shall be allowed to cross processions as soon as possible, when answering calls for their services. The Superintendent of Police is hereby empowered to issue, upon application therefor, a proper permit to any duly registered physician, and this permit shall not be transferable."

Why not make such a law universal?

Railway Surgery at the Pan-American Medical Congress.—

The Wabash Railway Surgical Association is interested in the work of making the Section of Railway Surgery at the Pan-American a success. One of their number, as noted in THE AGE of Nov. 25th, has been commissioned to prepare a paper for that occasion; and the Association has adopted a resolution offered by Dr. Wyman as follows:

Resolved, That each member of this Association solicit his Congressman to interest himself in legislation in favor of the Pan-American Medical Congress.

The Itch Parasite.—

Perroncito took a portion of the skin (Giorn. della R. Accad. di Med. di Torino, June, 1891) of a cat affected with itch, and found that for two days the acari were living and mobile in the liquid in which the preparation was placed. The third day the skin had a putrefactive odor, and numerous preparations made at this period showed many acari at different periods of development, but all of them dead. Putrefaction, therefore, leads to the death of acari as it does of worms.—*British Medical Journal*, Nov. 26, 1892.

Public Baths.—

New York and Boston are doing more toward supplying public baths than most other cities. In Boston these baths, which are under the charge of the Board of Health and are open during the four hot months of the year, were used 1,125,836 times during the past summer. Of the persons using them, 909,889 were men and boys, 216,947 women and girls.

To Fight Diphtheria.—

A. M. Levy has bequeathed to the French Academy of Medicine a sum of 50,000 francs ($10,000), the interest of which is to be handed over every year to the Pasteur Institute, to be applied in the furtherance of researches on diphtheria. The capital sum will be given as a prize to the discoverer of a genuine cure for that disease.—*Medical Record*, Nov. 26, 1892.

The Tri-State Medical Association.—

The fourth annual meeting was held at Chattanooga, Tennessee, Oct. 25th, 26th, and 27th. The same city and same date were chosen for the 1893 meeting. The officers elected were: President, Dr. Richard Douglass; Vice-Presidents, R. M. Cunningham, R. M. Horbin, W. C. Aberworthy; Secretary, Frank Smith.

Water at the World's Fair Grounds.—

It is announced that Chicago people, not having the greatest confidence in the purity of their drinking-water supply, have arranged to have the Fair grounds provided with drinking-water from a natural spring in Wisconsin.

A New Appointment.

Dr. John Ridlon has been appointed Professor of Orthopædic Surgery in the Post-Graduate Medical School of Chicago.

Therapeutic Brevities.

For Frostbite.—

℞ Acid. tannic., ʒ ss.
Glycerin. vel. q. ad ʒ j.
Spt. camphoræ, ℥ ss.
M. Sig.—Apply topically, with friction.

Or,

℞ Acid. tannic., gr. xxviij.
Tinct. benzoini, ℥ xxviij.
Spt. vini rectif., f ʒ jss.
Collodii, f ʒ ss.
M. Sig.—Apply topically, with a brush.

Or,

℞ Acid. hydrochlor. pur., f ʒ j.
Camphor. trita., ʒ jss.
Lanolin., ℥ ad ʒ j.
Vaselin. flav., ℥ ad ʒ j.
M. Ft. unguent. Sig.: Apply at night, with friction.

Or,

℞ Aluminis et potassii sulphat., ℥ aa gr. vj.
Acid. borat.,
Tinct. benzoini, ℥ xv.
Aquæ rosæ, f ʒ j.
M. Sig.—Topical application.

Or,

℞ Aluminis et potassii sulphat., ʒ j.
Vitelli ovi, no. j.
Glycerin. f ʒ ss.
M. Ft. emulsio. Sig.: Apply topically, with friction.

—Saalfeld, *Therap. Monatsh.*, No. 7, 1892 (*Medical News*, Dec. 3, 1892.)

Removing Superfluous Hair.—Dr. Van Allen highly recommends the following prescription for removing superfluous hair (Medical Record, Sept. 19, 1891):

Powdered air-slacked lime, ʒ j.
Orpiment (arsenic trisulphide, AS_2S_3), gr. ij.

Add water enough to form a paste, and mix. Apply to the hairy surface about a quarter of an inch thick. Allow the paste to remain for fifteen or twenty minutes, when it will be dry. Remove; and the surface which before was hairy will be as smooth as the palm of one's hand, the hair coming off with the paste. The skin may or may not be slightly reddened, but this redness will pass away within an hour or so. After a few days the eaten-off ends of the hairs will be seen on careful examination, but a second application of the paste will as before destroy the hair. These applications will have to be made about twice a week at first, then once a week, then once a month, etc. The hair grows at first very much as if it had been merely shaved off; later, on careful examination, each individual hair is found to be thinner than before, growing less strongly, the hair, if black, losing its color, and, in a word, yielding to the continual irritation of the paste. This treatment requires about a year or a year and a half to effect an entire cure, but it possesses the advantage that immediately after the first application the patient is, as far as all outward looks go, completely relieved of her deformity.—*New York Medical Times*, December, 1892.

New Form of Iodine Treatment for Tuberculosis.—Dr. Renzi (Revista Clinica e Therapeutica) employs iodine in phthisical cases according to the following formula:

Iodine, 1 part.
Iodide of potassium, 3 parts.
Chloride of sodium, 6 parts.
Distilled water, 1,000 parts.

He injected this solution into the ear-vein of both healthy and diseased rabbits, and into the subcutaneous tissue of rabbits, guinea-pigs, and dogs. Having in this manner carefully established the complete tolerance of the compound, he began to give it to his phthisical patients. Hypodermatic dosage was first tried with them, as much as 100 grains having been thus given. This method was not well borne, and the remedy was next tried by the mouth, the dose being from 500 to 550 grains. Nineteen patients, nearly all of them with advanced phthisis, were thus treated. Symptoms of iodism were produced in some patients, but did not persist long after a discontinuance of the doses. In all these persons there was an increase of appetite and of body-weight. There was an increased flow of urine, the temperature was brought down to normal, and the number of bacilli in the sputa was diminished. The writer believes the results of this plan will compare favorably with those of any of the other treatments at present in vogue.—*Journal of the American Medical Association*, Dec. 3, 1892.

Hydrastinine for Uterine Hæmorrhage.—Dr. Gottschalk has had a large and favorable experience with this drug, which he uses subcutaneously in the region of the glutei; or, if objection is made to this method, he does not hesitate to give it by the mouth. The latter channel must be used with care, otherwise gastric disturbance may be caused; not more than five-sixths of a grain three times a day should be given internally. The fluid extract may be given, 20 drops three

times a day, but the alkaloid has the advantage of being a more reliable preparation. Hydrastinine acts upon the vascular system to cause contraction of the vessels. It cannot be given in place of ergot, which acts upon the muscles of the uterus. He has found it serviceable in those uterine hæmorrhages which are due to marked congestion of the uterus; and climacteric menorrhagias are much improved by a careful treatment with this substance.—*Boston Medical and Surgical Journal*, Dec. 1, 1892.

Trional as a Hypnotic.—According to Dr. Böttiger, of Halle, trional is a particularly efficient and safe hypnotic. He has employed it in more than seventy cases of a mental and nervous character, and it very rarely produced giddiness, lassitude, or any other disagreeable symptoms. Its action was generally manifested in about a quarter of an hour, 15 grains being often, and 30 grains invariably, sufficient to induce sleep. When the excitement was but slight the trional succeeded very well in quieting the patient and in inducing sleep, and even in cases of severe mental excitement several doses of 15 grains each during the day acted so well as a sedative that hyoscine could be dispensed with. The only cases in which trional failed were those in which there was very severe neuralgia or where the mental and motor excitement was extreme, or in alcoholic patients. The drug was given at times by enemata, in the same doses as by the mouth, with equally satisfactory results.—*Lancet*, Nov. 26, 1892.

A New Remedy for Gonorrhœa.—Dr. Alejandro Infante, a militrry medical officer, communicates to the Revista Médica de Chile an account of several cases of gonorrhœa and gleet which had proved rebellious to ordinary methods of treatment, but had been rapidly cured by the internal use of the fluid extract of a plant, the Aplopappus llareta, which, like many other species which yield resins, belongs to the division tubuliferæ or cynaro-cephalæ of the order Compositæ. A fluid extract was prepared, and this was made into a mixture with water in the proportion of from 2 to 5 per cent. In the chronic cases two or three tablespoonfuls were ordered daily. In a very acute case, where the urethra was almost impervious, a tablespoonful of a 1-per-cent. mixture was ordered, at first every hour, and subsequently in less frequent doses of a stronger mixture.—*Lancet*, Nov. 26, 1892.

Myrrholin.—Dr. Kahn, of Würzburg, employs a solution of myrrh in an equal quantity of oil, under the name of "myrrholin," together with creasote, in laryngeal and pulmonary phthisis, finding that the myrrholin enables patients to bear the creasote far better than when the latter is given alone. He is not, however, as yet able to say whether the myrrholin exerts any direct action on the disease. He prescribes a mixture of 30 centigrammes of creasote with 20 centigrammes of myrrholin for a dose, to be taken in capsules. A cerate of myrrh has also proved very useful in eczema of the nostrils and in atrophic rhinitis, both simple and fetid. Pledgets of cotton wool impregnated with the cerate are passed into the nostril and allowed to remain ten or fifteen minutes.—*Lancet*, Nov. 26, 1892.

Chloro-Phenique in Diphtheria.—Dr. W. N. Bahrenberg states: "In twelve cases of scarlatina accompanied by diphtheritic sore throat, treated by me recently, I used a spray composed of equal parts of chloro-phenique and water as a topical application. It caused an immediate cessation of fetor and gave great relief to the patient. Convalescence was rapid in every case. I have also used chloro-phenique as a gargle and mouth-wash, and as a spray in otorrhœa and ozœna, with uniformly good results."

Removal of Mother-Marks.—The Allg. Med. Cent. Zeitung gives the following as very efficacious: Mix one part of tartrate of antimony with four parts of emplastrum saponatum, and work into a paste. Apply mixture over the mark to be removed to the depth of one line [one-twelfth inch], and cover with a strip of gummed paper or court plaster. On the fourth or fifth day suppuration sets in, and a few days later scarcely a sign of the mark can be seen.—*New York Medical Times*, December, 1892.

Salophen.—The active constituents of this remedy are salicylic acid and acetyl paramid ophenol, which are decomposed in the intestine by the alkaline secretions. Dr. Camier, Elberfield, reports in the Therapeutische Monatschefte marked relief from the drug in habitual headache when given in 15-grain doses every two hours; also as a promptly acting remedy in rheumatism and in a large variety of neuroses.

Medical Progress.

COLPO-PERINEORRHAPHY. — Edward W. Jenks, M. D., of Detroit, in Journal of the American Medical Association, July 16, 1892, says:

"In 1877 I read a paper before the Michigan State Medical Society in which were mentioned 'some new procedures in the operation for laceration of the perineum;' and Jan. 8, 1879, I read a paper before the Cincinnati Obstetrical Society, which was published in the American Journal of Obstetrics for April, 1879, describing the same procedure as in the first mentioned article, the latter being entitled 'Perineorrhaphy and a Description of a New Mode of Operating.' This paper advocated a new mode of submucous dissection of the tissues, or what is now designated flap-splitting.

"This mode of operating was favorably commented upon by the leading medical journals of the day, and the leading text-books on gynæcology published in this country continued for many years to sanction it. In that paper the cutting away of the flap instead of preserving it was advised. Subsequently I preserved the flap, and, believing for a time my mode of operating as well as the preservation of the flap was original, so stated when asked regarding it by some of my friends, notably the president of this Association (Dr. Marcy), who mentioned the matter in one of his publications. But learning that others had also described saving the flap, no claim has been made as to its originality with myself. The submucous dissection I described, or flap-splitting operation as now designated, was made several hundreds of times by me in public clinics, as well as by many others who had adopted it, some years before the flap-splitting operation of Tait and others had become known.

"However, I am not strenuous in claiming priority in the mode of operating I described so long ago, as it is of little importance, for I am only one of the great multitude working in the field of gynæcological surgery.

"I am prompted to this historical fact as an introduction to this paper, as the surgical procedures I made known fifteen years ago are occasionally referred to at the present time; and a late edition of a well known text-book that had previously commended it by means of lengthy quotations and illustrations now dismisses it by a brief allusion as 'too bloody.'

"Although repeatedly asked to write an additional paper, I have had other fields to cultivate, and what seemed more important in surgical matters to engross my time and attention; but of late there seems to have been a revival of interest in plastic gynæcological surgery."

Dr. Jenks summarizes his conclusions as follows:

1. Any single mode of operating is not adapted to every case of laceration of the perineum.

2. All other qualifications being equal, that surgeon will be the most successful in this class of operations who, instead of following hard and fast rules, possesses a mechanical skill which he can adapt to the peculiarities of each individual case.

3. The subsequent comfort of patients is not facilitated by superabundance of cicatricial tissue within the vagina; therefore the anterior wall, instead of being subjected to any surgical procedure for redundancy, should be sustained by a restoration of the normal posterior wall.

4. The surgical operation here advocated has for its object a restoration of the torn posterior vaginal wall and perineum to its normal condition, whereby there is afforded (*a*) support for the uterus to the full extent provided for in the vaginal walls; (*b*) support for the anterior vaginal wall and the bladder; (*c*) support for the lower end of the rectum.

INTERNAL ANTISEPSIS.—The Dietetic and Hygienic Gazette for November, 1892, says:

The brilliant achievements of modern surgery, based upon the recognition of a bacterial ætiology, have borne results in internal medicine which, sooner or later, must bring the true physician to grief.

Since antiseptics have led to such remarkable triumphs in the open field of surgery, why should not the same results be achieved in the hidden field of internal diseases, which have also been traced to micro-organisms? This appeared to be a legitimate corollary. And yet it has already proved so fallacious that it is time to call a halt in the eager pursuit of parasiticides that are supposed to pursue the microbe to its innermost hiding-place and destroy its vitality, ere it jeopardizes life and health. A little reflection must demonstrate that the treatment of infectious diseases by antiseptics is one of the will-'o-the-wisps of the present progressive era.

First. It is not probable that the action of parasiticides as demonstrated in the test-tube may be relied upon in the remote recesses of the human body. Conditions exist here which must modify or neutralize their effect. The various acid and alkaline fluids through which the antiparasitic rem-

edy must pass, the osmotic conditions to which it may be thus subjected, its possible entanglement in mucous or purulent fluids—all these operate more or less antagonistically against the precision which is attainable in the laboratory.

Second. A large proportion of the organisms to which are attributed baneful results in many diseases, are usually not accessible to the action of parasiticides. In typhoid fever, for instance—a disease in which superficial reasoning would direct their attack to the main lesions in the intestinal tract, a deeper study would develop the fact that ere the disease is diagnosed these organisms have already passed into the lymphatic glands, the spleen, and even into the small lenticular spots on the skin, which are the chief characteristics of the disease. How naphthalin, or salicylate of soda, or salol, or sulpho-carbolate of zinc, or bismuth, is to enter the blood and pursue these enemies into their very innermost lairs, "passeth the understanding."

Third. Even if this were possible, the experiments of Koch and others have shown conclusively that certain concentrations are required for certain bacteria. No sane man would venture to apply these concentrated solutions of antiseptics to any large surface of the body, lest their local or general effect resulting from absorption produce the most dire consequences. Nor would it be possible to maintain the integrity of the blood in which they are supposed to be dissolved.

Fourth. Even if this were possible, we are confronted with the fact that it is not the micro-organisms themselves which are to be dreaded, but the ptomaines and toxines whose effect is so destructive to the animal economy. Since the organisms are already firmly entrenched in the latter and have already begun their productive career when the physician's aid is invoked, the attempt to destroy them would be futile.

Arguing upon these briefly stated premises, it may be assumed that the internal administration of antiseptics in infectious diseases is not so promising as many enthusiasts would have us believe.

This pessimistic view may be met by the clinical demonstration of the value of the antiparasitic treatment in some diseases. Reports are constantly published of favorable results which are ascribed to antiseptics. Among these we may take as an illustration the application of sulpho-carbolate of zinc in typhoid fever, which is advocated by capable and intelligent physicians. As it is impossible to formulate definitely the results of any treatment in a self-limited disease, the simple clinical result cannot be accepted unless the rationale of its attainment appeals to our reason. The destructive effect of sulpho-carbolate of zinc upon the bacillus of Eberth has never been demonstrated even in the laboratory. Were this possible it would surely have been done. As has been well said in a recent able paper on this subject by Dr. J. J. Berry, in the N. E. Medical Monthly:

"That germicides, as such, have at times curative properties, is undisputed. We can understand how carbolic or salicylic acids arrest fermentation, but to be convinced that 5-grain doses of salol or sulpho-carbolate of zinc—both feeble germicides and hardly sufficient to sterilize an external ulcer—after running the gauntlet of the digestive fluids including an acid and an alkaline secretion, and after passing over twelve or more feet of intestine and many square feet of mucous surface, and escaping absorption, will find their way to the lower third of the small intestine, and promptly disinfect the secretions of twenty or more Peyer's patches, demands that truly sublime confidence in the efficacy of drugs which we have not yet been able to acquire."

If the disinfection of the intestinal contents be the object of the so-called antiseptic treatment of typhoid fever, even this object must fail of accomplishment by the usual remedies. In a disease like the summer diarrhœas of infants, in which bacteria have been shown to play an important rôle, and in which they are really more accessible than in any other disease, much may be accomplished by attacking these organisms. But surely no rational therapy would contenance the pouring of parasiticidal solutions into the gastro-intestinal tract. Recognizing the fact that food containing bacilli is one of the chief ætiological factors, its sterilization is resorted to as a prophylactic agent. Should bacteria, however, accumulate in the intestinal canal, they may be attacked by irrigation. Inasmuch as the lesions are usually found in the large intestine, this may be done with some show of success. But clinical experience has demonstrated here, as it has so often done elsewhere, that the more simply we treat these conditions the greater will be the success. Just as boiling water has been proven to be the best disinfecting agent for the surgeon's instruments, and boiled water the best disinfecting agent for fresh wounds (Schimmelbusch), so has the pædiatric physician discovered that plain boiled water is the most useful agent for intestinal irrigation, after adapting it to the sensitive mucous membrane by the addition of a little chloride of sodium. Just as in the pursuit of surgical

asepsis the mechanical element of the agent is regarded as more important than the chemical, so does the intelligent physician regard the simple washing of the diseased surfaces in the bowel superior to any germicidal action of chemical agents.

The lesson we would endeavor to enforce by the presentation of these facts is, the import of simplification in therapeutics, to which we have referred in previous issues.

Since the prevalent fallacious ideas on internal antisepsis may retard the progress of simplified therapeusis, we direct the reader's careful attention to the study of this important question of the day, in the light of the facts here presented.

How to Cure Eczema.—We know that the information we are about to give will be eagerly accepted, because of the frequency with which the question is asked. It was only the other day that a practitioner was overheard to inquire of a dermatologic friend, "What is the best thing to do for eczema?" Now, he might almost as well have asked, "What is the best treatment for disease of the skin?" since his question only excluded about two-thirds of all cases. Eczema has an ever-present interest for the general practitioner while it is to him that come the great majority of cases to be treated, and journals devoted to general medical topics are constantly disseminating knowledge for his guidance. In a recent issue of an exchange we find the following, which has already had a good start on its rounds, and will continue to be copied, we presume, until someone pauses to consider, as the editorial scissors are at work, that four drachms of salicylic acid to the ounce is rather strong treatment. Here is the prescription:

For eczema with abundant desquamation—

℞ Salicylic acid, gr. xv.
Oxide of zinc, gr. xxx.
Vaselin, gr. xxx

Charity forces us to the conclusion that in the original an ounce of vaselin was written or intended.

Still in the same journal we find the following:

Pruriginous eczema—

℞ Oxide of zinc, } equal parts.
Vaselin, }

It may be well to incorporate with these, if pruritus is present, a little oil of peppermint or carbolic acid, in the proportion of 1 to 4.

This would make it appear that the zinc and vaselin in equal parts was intentional in the first prescription. But why call 25 per cent. of carbolic acid "a little?" and in what forms of pruriginous eczema is pruritus likely to be absent?

The fact that there are so very many kinds of eczema, some depending on local, others on general, conditions; some sharply limited, while others extend over the entire surface; some simple, and others due to an association of ætiological elements; renders any attempt to generalize as to the treatment of eczema a difficult, and usually a futile, task. Take, as an instance of a single regional division, eczema of the lips. Before we can enter upon a rule of treatment we must further subdivide the subject into those forms which begin upon the skin proper, and those affecting primarily the vermilion border or mucous surface. Of the former we have the quite common eczema which appears beneath one or both of the nostrils, depends upon a discharge from them, simulates a sycosis, and is in all probability of parasitic nature. In such an instance the eczema is cured and recurrences prevented principally by treating the chronic coryza or other nasal trouble present. Another variety is that seen in infants, and attributed to a strumous diathesis. Here, certainly, remedies directed to the constitutional disorder form the appropriate treatment. Seborrhœal eczema of the lips, whether beginning at the junction of the skin and mucous membrane, or affecting other parts primarily, constitutes a rebellious disease which may have to be combated with resorcin, sulphur, salicylic acid, citrine, or other ointment, for a long time, and may then not succumb without the aid of arsenic, cod-liver oil, or other internal agents.

Other forms of intensely-itching dry and scaly labial eczema may be encountered, sometimes due to one cause and sometimes to another, and each particular case will have to be treated on its merits.

Marchand (Thèse de Paris) calls certain of these cases *eczema de la moustache*, which is not quite so bad as the term used by a well known oculist of this city, who, in sending a patient to a skin specialist, wrote: "I send you a case of moutachitis." Here again the question arises, Shall the lip be shaved, or the hairs clipped short? Shaving will, as a rule, be found too painful, if there is much infiltration and inflammatory reaction; and if carefully done with a sharp scissors, clipping will answer every purpose. Such hairs as are implicated in pustular formation can be epilated.

Besnier recommends complete epilation, followed by vapor douches, and continuous

application of caoutchouc or rubber bound upon the lip, under which protection the irritation rapidly diminishes.

One of the most constantly praised applications in eczema of the upper lip is the Lassar paste, the composition of which is about as follows:

℞ Zinci oxidi, } āā 10 grammes.
Pulv. amyli, }
Vaselin, 20 grammes.
Acidi salicylici, 40 centigrammes.

Dubreuilh omits the starch and adds about four grammes of sulphur, from which combination he reports good results.

If the eczema is of the seborrhœal variety, attention must be paid to any existing pityriasis or seborrhœal eczema of the scalp; for, as Unna has shown, unless the disease located here is kept in abeyance, recurrences will continue to take place on other regions.

Enough has been said to show that there is no royal remedy, or even any general plan of treatment, for the cure of eczema, and, as Besnier has well said, "he who will best treat eczema in general will be he who analyzes with the most solicitude and attention the conditions presented by each patient, and knows how to rectify his hygiene and correct whatever may be faulty in his organs or their functions."

When this lesson has been learned, a great deal will have been accomplished toward a knowledge of how to cure eczema.—*Medical Record*, Nov. 12, 1892.

Mercury Benzoate as an Abortive of Buboes.—Last year Dr. Welander, physician to the Saint-Göron Hospital, Stockholm, announced an abortive treatment of buboes with which he had obtained a cure in 91 per cent. of the cases where that treatment had been instituted before free suppuration of the tumors had set in (see Merck's Bulletin, vol. iv, p. 154).

Since then Dr. L. Létnik, physician in charge of the venereal division of the City Hospital at Odessa, has tried Welander's treatment in 140 patients with buboes, and has obtained complete resolution in 120—that is to say, in more than 87 per cent. of the cases. In the remaining 18, all cases in which there was already marked suppuration when the treatment was begun, he was obliged to incise the tumor.

Dr. Létnik proceeded as follows (Sem. Méd.):

After having carefully disinfected the inguinal region, 1 cubic centimeter [16 minims] of a 1-per-cent. solution of mercury benzoate was injected into the swollen gland. This done, a compressive bandage (composed of cotton and a linen bandage) was applied over the bubo, and renewed once or twice in twenty-four hours. The patient had to observe the most complete rest during the whole treatment.

Immediately after the injection, there developed, at the site of puncture, a burning pain, which gradually disappeared in eight to twelve hours. In the evening and on the following day the patients usually experienced a little cephalalgia and presented an elevation of temperature amounting to 1° C. [1.8° F.) or more. Locally, an inflammatory reaction manifested itself by an excess of heat and of redness; however, these symptoms soon vanished, and the bubo progressively diminished in size, and in the majority of cases disappeared entirely in six to ten days. Only in twelve patients did the complete resolution of the tumor require as much as twenty days. The average duration of the treatment was a little less than ten days. This certainly brilliant result was obtained in the great majority of the cases from but a single injection, and it was necessary only in a few rare cases to make a second injection at an interval of eight days from the first.

In the course of his observations the author has become convinced that it is not at all necessary to use the benzoate of mercury for the injections into the buboes, but that the same results can be obtained by injecting *any soluble mercurial salt*—the biniodide, bichloride, or cyanide, always in doses of 1 centigramme [⅙ grain].

Dr. Létnik believes that this method deserves being tried also for aborting acute phlegmons, suppurating arthrites, and abscesses consecutive to infectious diseases, whenever the morbid focus is accessible to injection and to compression with a bandage, and when the suppuration is yet in its incipiency.—*Merck's Bulletin.*

Dyspnœa, and its Treatment by Drugs.—Dr. W. Tennant Gairdner classifies his cases as: (1) Due to hæmatic causes, remedied by iron, arsenic, hygienic conditions, food, exercise, possibly by inhalations of oxygen. (2) Due to pulmonary causes, when expectorants are indicated, stimulating the "scavenger muscles" of the bronchial tubes, avoiding the use of opium. (3) Due to extrapulmonary causes other than hæmatic, as cardiac, pleural, or pericardial effusions; dropsical swellings of all kinds; uræmic, when this origin must be carefully consid-

cted; and in general the maxim of Baglivi should be observed, to use diuretics, or, in the failure of these, to employ drastic cathartics, or rarely venesection.—*Medical Press*, 1892, No. 2779, p. 131.

Prof. Leech finds that the nitrites will relieve certain forms of dyspnœa, and his preference is for the nitrites of ethyl and soda, and nitroglycerin, as more effective and of more lasting influence than nitrite of amyl. A teaspoonful of a 3-per-cent. solution of nitrite of ethyl is the most convenient form for administering a nitrite in dyspnœa. In case of failure with the nitrites he advises the vapor of ammonia.

Dr. Handford believes that the dyspnœa of migraine can be speedily relieved by saline aperients.

Dr. Oliver regards the use of morphine to be beneficial in some cases of bronchitis and of emphysema, accompanied by orthopnœa. In uræmic dyspnœa the nitrites were of very great service, but he would limit venesection to those cases in which dyspnœa was dependent upon, or associated with, dilatation of the right heart.

Dr. Wilberforce Smith advises in spasmodic paroxysms, belladonna, preferably a few drops given with little or no water, or administered by a spray-producer; in congestive cases, the cautious use of the hot-air bath; in the dyspnœa of anæmia (in girls), the prohibition of corsets.

Frederick Pearse, in acute spasmodic asthma, and in that associated with tumultuous action of the heart, recommends one or two 5-minim doses of Fleming's tincture of aconite.—*British Medical Journal.*

The Treatment of Aortic Aneurism.—It is to be hoped that the ingenuity and perseverance shown by surgeons and physicians in their attempts to cure aneurism of the large arteries will be eventually successful. The history of the therapeutics of this trouble is extremely interesting, but also very disappointing. The ancient and heroic methods of ligation illustrated how near a bold surgeon could get to the heart without killing the patient at once; the operations were successful, perhaps, but the patient died. The attempts of surgeons have in late years been directed mostly to some method of producing mechanically coagulation of the sac. At first the galvanic current was tried; then foreign bodies, as wire or catgut, were introduced. Not long ago Macewen advised the practice of scratching the inner surface of the sac with needles. A combination of the galvanic current and a long wire has been tried several times. In the American Journal of the Medical Sciences for October, Dr. D. D. Stewart reviews the results of this mode of treatment and contributes a case of his own, making a total of eight. Of these eight, six died and two were improved or cured. In most of the six fatal cases the operation was not attempted until the patient was in a hopeless condition. Furthermore, Dr. Stewart shows that the technique has usually been imperfect, and his observations lead one to hope that with greater experience and skill we may yet be able to relieve many heretofore hopeless cases. Dr. Stewart advises the use of silver wire in preference to steel, soft iron, or catgut. The wire should be fine and should be drawn just sufficiently hard to be readily passed through the cannula, forming spirals in the sac. It is believed that six to ten feet of wire are sufficient. A strong galvanic current of 50 to 70 milliampères should be passed through the aneurism for an hour, the anode being attached to the intra-aneurismal coil.

Shock and Its Treatment.—Kottmann (Wiener Med. Presse, 1892, No. 21, from Correspondenzblatt für Schweizer Aerzte) states that the most important signs of shock are weakness of the heart, faint respiration, skin pale and covered with cold sweat, face drawn out, sunken eyes, and livid lips; consciousness remains; sensibility reduced. Shock appears when certain very sensitive organs, as testicles, bones, or bowels, have been subjected to contusion or other serious injury. Shock may occur from hæmorrhage, and is then associated with functional changes in the body of which there are no post-mortem evidences. Two theories are advanced: the first defines shock as a reflex paralysis of the heart and vessels, caused by the trauma; according to the second, the injury causes, reflexly, exhaustion of the medulla oblongata and of the spinal cord, and, as the nerve centres are affected, there is debility of heart and respiration. The fever which accompanies shock is, according to Kottmann, the consequence of trauma. The substances causing the fever are here chemical and not bacterial, are freed from normal tissue matter by the injury, and include hæmoglobin, fibrin ferment, and similar elements. The author objects to confounding shock with debility due to hæmorrhage. In the latter there is rapid pulse, quick, deep, panting respiration. In shock, the patient presents the evidences of cerebral irritation, noises in the ears, affected vision, palpitation, yawning, and even convulsions. In severe cases

of shock the usual remedies—alcohol, ether, caffeine, and camphor—may be used without relief. The similarity in the appearances resulting from hæmorrhage and from shock induced Kottmann to use salt-water transfusion in four cases, with good results. By the neuro-pathological theory the explanation is that the effect of the salt solution is to stimulate the centres with which it comes in contact, and with increased arterial pressure the central nervous system would receive more blood and recuperate more quickly. If the hæmo-pathological theory is accepted, the explanation is even more simple: the salt-water would fill the empty heart and vessels, and the hydraulic requirements would be fulfilled while the blood in the distended abdominal vessels was being restored to the circulation. Patients suffering from shock often require severe operations, especially the amputation of members. Experience shows that chloroform anæsthesia in these cases is attended with unusual danger; the danger is less with ether, which acts as a heart stimulant.—*American Journal of the Medical Sciences*, November, 1892.

Sparteine as a Cardiac Medicament.—In a conscientious study of sparteine, Pawinski of Warsaw seeks to determine the most favorable doses to excite the tonicity of the heart and regulate it. In his hands small doses—one to two centigrammes at a time—repeated four to eight times daily, gave the best results. Doses of six to eight centigrammes, also given four to eight times, seem too large. He thinks one of the most valuable actions of the drug is its sedative action on the nervous system of heart cases. He noticed that it acts particularly well in cardiac disease complicated with nervous troubles, hysteria and neurasthenia. Consequently he administered it with great success in functional cardiac affections, such as palpitation, precordial pain, the anginas of anæmia, hysteria, neurasthenia, nicotinism, alcoholism, the morphine habit, and that from severe mental or physical strain.

It may be stated that all authors who have witnessed the therapeutic effects of sparteine agree in according the following results to it: (1) Rapidity of action. (2) Augmented tonicity of the cardiac muscle. (3) Regulation of the pulsations. (4) Return of the pulsations to the normal type. (5) No cumulative effects. (6) No positive contra-indication to its use. In disorders of cardiac innervation only is it necessary to moderate the dose.

These conclusions show in what class of cases its employment is necessary, viz.: In all where we wish to obtain the first four of the above results. In all cases where the heart muscle is flabby from either alterations of its tissue, insufficient compensation, or cardio-vascular asthma. In all likewise where the pulse is irregular: in cases of cardiac asthma; valvular lesions, aortic or mitral; stenosis, insufficiency; in pericarditis, cardiac dyspnœa, the hypertrophy of adolescence, etc.—*Rev. Therapeutique des Alkaloides* (*New York Medical Times*, October, 1892).

Action of Ox Serum in Syphilis.—A short time ago Tommasoli, of Modena, announced that he had succeeded, by making injections of the serum of lamb's blood into patients showing all the usual manifestations of syphilis, in completely subduing all these symptoms and practically curing the patients (Epitome, April 2, 1892, par. 305). In a recent communication (Gazz. degli Ospitali, Aug. 2, 1892) Sartori brings forward four fresh cases in which results similar to those already mentioned were obtained. This time, however, as lamb's blood was not obtainable, the material employed was ox serum, which seems to have been just as efficacious. Of the four patients whose cases are described, one had undergone a partial treatment with lamb's serum and was included in the previous record; the treatment having, however, been only incomplete, he had again come into the hospital. The other three were syphilitic, two of recent date and the other affected for more than ten months. None of these had previously undergone any other treatment. The injections were in every case made into the buttock on alternate sides, the mean dose being 6 c. c. The first case lost all manifestations of his disease after the eleventh injection; the second appeared also to be free after the fifth injection, and was discharged after two further doses; in the third, eight injections were necessary; in the fourth and last case, only seven injections were required. Slight symptoms of shock seem to have made their appearance on rare occasions after some of the injections; but nothing alarming was ever noticed, nor anything which would make it imperative to discontinue the treatment.—*British Medical Journal.*

Dermatol.—Colosanti (Rif. Med., Nov. 30, 1891) has made a series of bacteriological experiments in order to determine the relative microbicide power of dermatol, iodo-

form, and aristol. The action of these substances was tested on wet cultures, and on others dried on sterilized paper. The micro-organisms experimented on were staphylococcus pyogenes, staphylococcus pyogenes albus, bacillus pyocaneus, and the typhoid bacillus. Cultures of these micro-organisms in broth, mixed with iodoform and aristol, were alive and grew luxuriantly after eight or nine days. Similar cultures mixed with dermatol seemed to have almost lost their power of multiplication on the fourth or fifth day. On the dried cultures neither dermatol, iodoform, or aristol had any effect after having been kept for three days in contact with them.

Colosanti and Dutto (*ibid.*) have tried the effect of dermatol given internally in a large number of cases of diarrhœa, in phthisis, typhoid, ulcerative colitis, etc., administering it either in wafers, suspended in gummy emulsions, or occasionally combined with powdered opium. The daily dose was from 2 to 6 grammes, according to the severity of the case. The effect was satisfactory, and no toxic symptoms were observed. The urine was normal, but the fæces were in nearly every case intensely black, owing to the formation of sulphate of bismuth.

Filtered or Boiled Water?—M. A.-J. Martin, under this title, presents a very carefully studied paper. Recognizing the fact that many filters, so far from separating the bacteria, may even make the water richer in these organisms, this method cannot be recommended. Boiled water has lost its carbonic acid gas, and the salts of lime and magnesia are precipitated; the taste is flat, although on standing in a cool place it reabsorbs the greater portion of the lost gas. Even boiled water ought not to be long preserved. The problem apparently was solved in heating the water without loss of air, cooling it mechanically, and adding oxygen by means of an air-pump; or it can be boiled in closed bottles. Various ingenious apparatus have been devised for boiling water in closed vessels under pressure, and cooling it in the same apparatus. Investigations have shown that the slight differences observed in the chemical composition of the water before and after sterilization have not altered its potability. With a filter, one can drink only the water of which he knows the source; with boiling, one can use any water. Boiling, then, should be the procedure of choice as soon as any suspicion arises; it should be the rule, especially in large cities, during the progress of any epidemic.—*Gazette Hebdomadaire de Medecine et de Chirurgie*, 1892, No. 37, p. 433 (*American Journal of the Medical Sciences*, November, 1892.)

Smoke for Tubercular Phthisis.—Dr. W. C. Albertson (Medical Record) has the honor of introducing a new method in the treatment of pulmonary tuberculosis. He speaks of the antiseptic and penetrating qualities of smoke, claims that it does no harm to the most delicate mucous membrane, and recommends it as an efficient agent in bacillar phthisis. He takes beechwood sawdust, mixes it with some harmless, quick-burning substance (tobacco?), and directs his patients to smoke it in an ordinary clay pipe. The treatment is continued from two to six months. Improvement is manifest after two or three weeks. At first the smoking causes cough, with increase of power to eject sputa. Both cough and expectoration then decrease until they cease. The weight increases. The temperature soon falls, but the pulse remains rapid to the last. At first the smoking is continued for but a few minutes, but the time is increased to forty minutes, and the smoking repeated two or three times a day. Eucalyptol and other drugs could be used on the sawdust. The idea might further be utilized in the treatment of diphtheria.—*Times and Register* (*Cincinnati Lancet-Clinic*, Nov. 12, 1892).

A Substitute for the Nasal Douche.—Dr. Bloebaum no longer uses the nasal douche in removing crusts from the nasal cavity. He simply twists a long and thin roll of cotton onto a knitting-needle, introduces it into the nose, and withdraws the needle, leaving the cotton in the nose. A second and third roll are introduced thus, until the entire cavity is filled. Then one may begin with the opposite side and do likewise. In the course of a quarter of an hour the mucous membrane begins to secrete profusely, and if the cotton is then removed it will be found that it is saturated with secretions, and the crust lies on the cotton, thus leaving a nicely cleaned cavity for the application of the remedies. He never employs any watery solutions, but salves, which are rubbed into the nasal mucous membrane, or powders, which are insufflated.—*Lancet-Clinic* (*Medical Record*, Nov. 12, 1892).

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Original Articles.

ON CIRRHOSIS OF THE LIVER, AND ITS TREATMENT.

BY PROFESSOR DUJARDIN-BEAUMETZ.

We give the name *cirrhosis* to a chronic inflammation of the liver anatomically characterized by a general hyperplasia of the connective tissue, the consequence of which is strangulation of the hepatic cells. This simple definition is of recent date, and it has cost pathologists years of research and experimentation to attain to a knowledge so clear and precise.

The true nature of the cirrhoses was for a long time obscured by erroneous notions as to the anatomy of the liver. That organ was supposed to be composed of two substances, the one red and the other yellow; and it was held that the predominance of one of these substances—the red over the yellow—was the cause of all the disorders appertaining to this state of chronic inflammation.

Laënnec, as is well known, was the first to give to this sort of inflammation the name of *cirrhosis;* and this was because the granulations with which the liver is studded, and which he considered of neoplastic nature, presented a special color bordering on the red (*Kirros*, reddish). But it was Dujardin and Verger who, in 1839, the most conspicuously maintained the existence of two substances in the liver, the one yellow and the other red—a view which Ferein and Audral had previously defended. Becquerel in his turn advocated these notions, but with other arguments. He maintained that this hypertrophy of the yellow tissue is due to the infiltration of this substance by a plastic matter of albumino-fibrinous nature.

This was a first step toward a correct pathological anatomy. Thanks to microscopical examinations, histologists soon obtained more precise data as to the anatomy of the liver. Kiernan in 1833 was the pioneer in this direction; and if we come down to 1853 we find Gubler in his *Thèse d' Agrégation* demonstrating that in cirrhosis we have to do with a hyperplasia of the connective-tissue element which, by destroying the cellular element, atrophies and deforms the liver.

This atrophy, according to these writers, was generally partial, but it constituted one of the characteristic elements of cirrhosis.

This last point was attacked in 1857 by Todd, who showed that the atrophy which his predecessors considered as an essential element of cirrhosis might not exist. And almost twenty years later, Hanot (in 1876), in his fine treatise on "Hypertrophic Cirrhosis," showed how Todd was right in his conception of a hypertrophic cirrhosis.

Since then, many works have appeared on this subject, and we may say to-day that cirrhosis is multiple, not a unit—*i.e.*, that the hyperplasia of the connective framework of the liver may have for its starting-point the different canals which traverse the liver. And it is this general idea which will guide me in the division which I shall propose of the different cirrhoses.

The liver possesses not only bile-ducts, but afferent and efferent veins of the nutrient vessels which are furnished to it by the arterial system. If you add to these ducts a lymphatic network, you will have a conception of the different circulatory vessels with which the hepatic parenchyma is in contact. Each of these systems of vessels may be the centre of an inflammatory process, beginning and spreading in the cellular tissue pertaining to such system, to which the name of *cirrhosis* is applicable. Connected with the radicles of the vena portæ, we have the most common kind of cirrhosis—that of Laënnec. The hepatic veins are the seat of a different pathological aggregate, the cirrhosis of the cardiac—the nutmeg liver of the old writers. Inflammation of the endarterium

of the hepatic artery determines a cirrhosis still poorly known—that which is noted in the victims of arterio-sclerosis.

Inflammation of the bile-ducts in the interior of the hepatic parenchyma, and of the originating radicles of these ducts, leads to a particular state of the liver which is considerably differentiated from common cirrhosis or the cirrhosis of drunkards. I refer to the hypertrophic cirrhosis of Hanot.

Lastly, the lymphatic network may be the point of departure of a cirrhosis with cicatricial bands—the cirrhosis of the syphilitic.

If from a clinical and anatomo-pathological point of view we are well informed as to alcoholic cirrhosis, it must be admitted that the therapeutic data are of little account. Hanot and others who have had the most experience with this malady acknowledge as much. Nevertheless, the means employed to combat hypertrophic cirrhosis with icterus are the same as those in usage for common cirrhosis; and these are the subject of the present study.

The first question is: Is common atrophic cirrhosis curable?

When we consult the numerous observations on which authorities base the possibility of the disappearance of ascites in the cirrhotic, we are led to conclude that if hepatic cirrhosis has been very rarely cured in the absolute sense of the word, there have been a number of notable cases of relative cure where the ascitic effusion has been known to disappear for years.

The number of cases thus far tabulated amounts to almost a hundred, and the excellent thesis of my pupil, Dr. Willemin, "On the Curability of the Hepatic Peritoneal Accidents of Alcoholic Cirrhosis" (Paris, 1890), contains a detailed account of more than eighty-eight of these observations.

Without going back to the ancient observations of Hippocrates, of Galen, of Riolau, and of Portal, where are recorded cases of ascites which got well spontaneously or after tapping (observations to which we may apply the pertinent criticism that cirrhosis was unknown at that time and that those old cases were simply cases of abdominal dropsy of uncertain origin), I will indicate particularly the work of Chrestien of Montpelier, who, in support of the utility of milk in the treatment of ascites, cites several remarkable cures of cirrhotic dropsy.

Semmola, of Naples,* was the first (1879) to insist upon the possibility of the cure of alcoholic cirrhosis by an exclusive milk diet. According to him, such cure is possible in the first stages of the disease, before the liver has undergone atrophic degeneration.

In 1874, Lendet called attention to the curability of ascitic effusions determined by lesions of the peritoneum in the alcoholic; in 1879 he took up the same subject at the Congress of Montpelier.

In 1881, Bouveret, of Lyons, urged the curability of cirrhosis; and in this connection I cannot do better than refer to the discussion which took place concerning a communication made by Troisier to the Society of the Hospitals, July 9, 1886.†

Troisier reported a case of ascites accompanying cirrhosis, where the ascites disappeared after abundant diuresis, and he stated the question in these terms: "Does there exist a curable form of alcoholic cirrhosis of the liver?" and successively Dieulafoy, Letulle, Bucquoy, Rendu, Richard, Millard, and myself communicated to the Society of the Hospitals during the year 1886 and the following years a series of observations of evident cure of hepatic cirrhosis. During 1887 Lancereaux communicated to the Academy a very interesting paper on "Cirrhosis of the Liver," and he showed from ten cases which he had collected that cirrhosis is curable, at least relatively. Millard, in 1888, reported three cases of alcoholic cirrhosis cured. Lastly, if to this mass of documents I add the theses of Desaux, of Françon, of Rebeton, and particularly of Eugene Willemin, you will have all the cases that have been reported—at least in France.

These observations may be grouped under three distinct heads.

Under the first we include a very numerous group of alcoholic patients whose ascites and whose hepatic troubles were seen to disappear under an appropriate treatment, but who were then lost sight of, so that the future history of the cases could not be followed.

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*Jour. de Thér. de Gubler, Oct. 10 and 25, 1879.

†Bull. et Mem. de la Soc. des Hôp., 1886.

In the second group are such cases as were under observation after their recovery. In half of these cases a relapse occurred in a variable time, from one to four years.

In the third group—by far the most important, being absolutely demonstrative—an intercurrent disease carries off the patient, and the autopsy confirms the diagnosis of cirrhosis. One of the most typical observations, in this respect, is the case which I presented to the Society of the Hospitals, Aug. 13, 1886; I shall in a few words sum it up:

The patient was a man, 38 years of age, who entered Cochin Hospital Feb. 17, 1886, for ascites. The man had been a hard drinker; by profession a wine-dealer. He had, moreover, all the general signs of inebriety: trembling of the hands, nightmare, morning vomitings of pituitous matter.

The ascites augmenting, and the cachexia becoming more pronounced, we tapped the patient and drew off five and a half gallons of liquid. This took place on the tenth of March. For treatment, we gave him milk and a solution of hippurate of lime (described in a recent lecture of mine).

Under the influence of this treatment, the ascites did not return, the patient regained his health, and we kept him under observation till the twenty-sixth of May. He left the hospital on that date, only to get drunk; he passed the night out of doors, lying on the damp ground, and was taken the next morning with a chill; pneumonia of the left lung set in, and he reëntered the hospital on May 27th; the disease made rapid progress, and he died two days later.

The autopsy was made with great care, and Dr. Debief undertook the histological examination of the liver. The organ weighed 2.7 kilogrammes (between five and six ponnds); on section it creaked under the knife, and the hepatic substance presented the well known appearance of cirrhosis. The spleen was voluminous and weighed 800 grammes, and there was some perisplenitis, as is the rule in cirrhosis of the liver.

The histological examination displayed the following lesions: Each hepatic lobule was surrounded by a large band of adult connective tissue, from which issued thinner tracts which penetrated the interior of the lobules across the hepatic cells; but the hepatic cells were normal in most of the lobules, only in a certain number there existed manifestly a commencing fatty degeneration.

This autopsy showed us plainly that our patient was indeed affected with cirrhosis, as we had diagnosticated, but with a cirrhosis but little advanced, where the sclerous process had not destroyed the hepatic cell; and this leads me to take up here another point of the therapeutic problem which demands solution, namely: Since it is demonstrated that alcoholic cirrhosis can get well, at what period may this be brought about, and how is it brought about?

It is always at the commencing periods of cirrhosis that cure is obtainable; but in proportion as the retraction of the connective tissue takes place, destroying the hepatic cell, recovery becomes more and more rare—for, as Semmola observes, the atrophied and deformed liver is wholly irremediable.

We may then conclude that the cirrhoses with enlarged liver present the most, or in fact the only, chances of cure. The observation which I have cited is a remarkable instance: there was hyperplasia of the connective tissue, but the hepatic cell itself was not destroyed.

May we during life recognize by positive symptoms the state of the hepatic cell? and apart from the physical signs which enable us to determine the volume of the liver, have we any other symptoms which may guide us in our prognosis? The most important signs are almost exclusively derived from the examination of the urine, and in an excellent article "On Prognosis in Alcoholic Cirrhosis," Merigot of Treigny called attention to this fact.* The more scanty the urine, and the less its quantity is affected by ordinary diuretic agents, the more grave our prognosis.

The examination of urobilin completes the first data as to prognosis.

Some idea of the state of the hepatic cell may be obtained by noting the quantity of urea in the urine of twenty-four hours. Cirrhotic patients, especially in advanced periods of the disease, have their nutrition so disturbed, and take food with so much

*Revue Gén. de Clin. et de Thér., Oct. 26, 1892.

difficulty, that it is easy to understand the small quantity of urea in their urine without ascribing its disappearance altogether to destruction of the hepatic cell. At the same time, whenever in a cirrhotic patient subjected to an exclusive milk diet the quantity of urea augments, we may well deduce a favorable diagnostic conclusion.

(*To be continued.*)

THE MEDICAL LORE OF SHAKESPEARE.*

BY R. NEWTON HAWLEY, M.D.

One of the most plausible arguments advanced by those who would have us believe that the plays which for nearly three hundred years have stood almost unquestioned as the work of William Shakespeare, were written by another, is based upon the proposition that the author was a man possessed not only of the widest range of general knowledge, but also of such a high degree of special and technical knowledge of various professions as could only be attained by one familiar with the study and practice of them. It has been held that only a man familiar with camps and sieges and the art of war could have created Shakespeare's soldiers. Great jurists have seen evidence of the most profound legal lore in his pages, although there is no authentic record of his ever having seen a law book; and further, his inimitable delineations of all the varied conditions of the human mind, the phases of insanity, the frequent mention of diseases, of drugs, and indeed of many subjects of interest to our profession, have, not unnaturally, suggested that the author was acquainted to some extent not only with the medical learning of his own time, but with the precepts of that long succession of scholars which began with Hippocrates.

The little that is known of Shakespeare is not so encouraging to confidence in his profound knowledge, as to faith in the transcendancy of his genius. It has seemed to me that the medical learning of the poet has been rather alleged than proved—this, however, if true, would not detract from his greatness, but increase it. Morbid mental conditions are often depicted with a realistic accuracy. Bodily diseases, or rather symptoms, are frequently mentioned, but not often described in detail. Physiological conditions and mental emotions in health and disease are often noticed.

Physicians are depicted in but few instances, but are found in about the same relative proportion to other characters as they would be in the times and places where their lots are cast. Little is said that throws much light on their methods of treatment. Apothecaries are seldom met with; but with monks, friars, charlatans, and witches, and their herbs, drugs, charms, and incantations, we are made familiar.

Shakespeare did not write for the learned professions, but for the world; not for his age, but for all time. Unlike many learned men, he knew the limitations of mere book-learning, and used it so far as to produce the effect required and no farther. He knew when to stop; he was not writing learned treatises on law and medicine. His learning is not of the pedantic sort, too common with scholars, but is drawn from the book of Nature, and does not lead him into serious mistakes. It leaves his readers with the impression that the monster storehouse of his mind has only been drawn on for the purpose in hand, and that the reserve is as inexhaustible and boundless as before.

In forming an estimate of Shakespeare's medical learning, we must not forget the crude state of scientific knowledge in his time. Shakespeare died in 1616, and Harvey did not publish his discovery of the circulation of the blood, the foundation of modern scientific physiology, until 1628, or twelve years after Shakespeare's death. There occur several lines in the plays which have given rise to the conjecture that Harvey's immortal discovery may have been foreshadowed in the mind of the poet.

In the play of *Julius Cæsar*, Brutus, in answer to his wife, who is trying to persuade him to remain at home when he is going out at night to meet the conspirators, uses this expression:

> As dear to me as are the ruddy drops
> That visit my sad heart.
>
> —*Julius Cæsar*, act ii, sc. i.

*Read at the meeting of the Milwaukee Medical Society, Nov. 8, 1892.

The word *visit* implying motion. And again we have the same idea of motion conveyed in the words of Falstaff in extolling the effects of his favorite beverage:

> The second property of your excellent sherris is —the warming of the blood, which, before cold and settled, left the liver white and pale; which is the badge of pusillanimity and cowardice; but the sherris warms it and makes it course from the inwards to the parts extreme.—*Henry IV*, Part II, act iv, sc. iii.

In this saying of the fat knight we have a description of the primary physiological effect of alcohol, and also a hint about the circulation of the blood. Dr. B. Rush Field, in his "Medical Thoughts of Shakespeare," cites upward of forty quotations containing suggestions of Shakespeare's knowledge of the circulation of the blood. Some of them, perhaps, are rather "far-fetched," but the number of them, and the directness of a few, would preclude the probability of their being merely accidental, and would indicate that the poet was familiar with the theories of the older medical writers.

The discovery of the circulation of the blood was not the inspiration or accident of a moment. Some two hundred years and more before the Christian era, the Greek anatomist Erasistratus taught that the arteries were air-vessels. This theory was accepted until the time of Galen, A.D. 131, who taught that the arteries were blood-vessels as well as the veins.

The progress of the evolution of physiological knowledge was very slow, little being added to the teachings of Galen until the sixteenth century, when the Spanish physician Michael Servetus discovered the circulation through the lungs. In the same century and at nearly the same time, Realdo Columbus of Padua, and Andreas Cæsalpinus of Pisa, made the same discovery.

About 1543, Andreas Vesalius of Brussels demonstrated the error of Galen, who believed that openings existed in the septa between the two sides of the heart. So it is no disparagement to Harvey that it only remained for him to grasp the truth which his predecessors had sought so long and approached so nearly, and to discover the circulation itself. The idea of the movement of the blood, and the action of the heart, being old in Shakespeare's time, it is not at all unreasonable to suppose that he had become acquainted with the theories of the older medical writers through conversation with his son-in-law, the physician of Stratford, Dr. John Hall; and I cannot see in any of the lines suggesting the circulation of the blood any evidence of medical or scientific knowledge that would have been at all astonishing in an intelligent and observing layman.

I find fewer quotations bearing on anatomy than on any other subject connected with medicine. Dr. Field, before mentioned, says anatomy received some attention, but, from the quotations he gives to support this statement, one might judge the poet's knowledge of this branch of science to have been somewhat apocryphal. Mention is made of one of the cerebral ventricles, which he calls the "ventricle of memory," where it is said:

> A foolish, extravagant spirit, full of forms, figures, shapes, objects, ideas, apprehensions, motions, revolutions—these are begot in the ventricle of memory.—*Love's Labor Lost*, act iv, sc. ii.

The older anatomists thought the brain had but three ventricles. What is now the fourth was called by them the third, and was supposed to be the seat of memory.

The pia mater is mentioned in at least two instances that I have observed. Once in *Love's Labor Lost*, act iv, sc. ii; and again, as follows, in *Twelfth Night*, act i, sc. v, when the clown says to Olivia:

> Thou hast spoken for us, Madonna, as if thy eldest son should be a fool; whose skull Jove cram with brains, for here he comes; one of thy kin has a most weak pia mater.

Now, although this expression is put in the mouth of a clown, it has a meaning which might not be apparent to the casual reader. The pia mater covers the brain and protects it, and nourishes it by the blood supplied by the vessels which ramify through it and penetrate the cerebral substance; so when the clown speaks of a weak pia mater, it is only a delicate way of saying that the person alluded to is somewhat lacking in one of the anatomical constituents of intelligence. Now this sentence could scarcely have been written by a man entirely devoid of anatomical knowledge; but where did Shakespeare get it, as well as such other medical knowledge

as he seems to have had? Probably much of it from Dr. John Hall. But there is another source which has only recently been brought to light.

The New York Medical Record, Dec. 8, 1888, p. 690, quotes Dr. B. W. Richardson in The Lancet as follows: "The mode in which William Shakespeare obtained his knowledge about the pia mater is, I think, fairly explained from a curious literary discovery which I was so fortunate as to drop upon in my readings. A few months ago I came across a large volume of Anatomy, published in the year 1615 by Helkiah Crooke." Dr. Richardson goes on to say that this book was probably the first great work on anatomy published in the English language. It contains over one thousand pages, imperial quarto, and is illustrated by numerous drawings of anatomical subjects. It contains, besides anatomy, various passages of a physiological and psychological nature. In this work the membranes of the brain are well defined and described, and the pia mater takes a very distinct place. "Now what connection," asks Dr. Richardson, "has this book of Anatomy by Helkiah Crooke, with the plays of Shakespeare? This remarkable connection—that the man who printed the works of Crooke was W. Jaggard, of the Barbican, London, the same man who was the printer for Shakespeare. Within easy walking distance from the Globe Theatre, the scene of the great William's managerial glory, was the printing office of Jaggard, where the plates and letter-press of Crooke would for long seasons be the most remarkable presswork of the time. To that office the indefatigable playwright would often be drawn by his own business, and there he would hardly fail to see unfolded before him the anatomy of man, from a sure source and in just the form that would most readily appeal to his ever absorbing mind. . . . . I might go a long way farther," says Dr. Richardson, "in exposition of the source of Shakespeare's anatomical knowledge generally; for the closer this book and the book of the plays are read together, the more clearly is it detected where and how the dramatist became the student of anatomy; but at this moment I am content to stop with the proposition placed before the reader, that the pia mater argument of Shakespeare was simply derived from the work and plates of his industrious contemporary, Helkiah Crooke, doctor of physic, physician to His Majesty, and professor in anatomy and chirurgery."

The idea of experiments on the lower animals is an old one. It is mentioned in *Cymbeline*. The physician Cornelius, in conversation with the Queen, suspects that the lady's interest in these investigations is prompted by some motive less worthy than the pursuit of science—in fact, that she wants to poison some one. Note the courteous but diplomatic way in which he deals with her. The Queen says:

> Now, master doctor; have you brought those drugs.
>
> *Cornelius:* Pleaseth your highness, ay: here they are, madam:
> But I beseech your grace (without offence;
> My conscience bids me ask), wherefore you have
> Commanded me of these most poisonous compounds,
> Which are the movers of a languishing death,
> But, though slow, deadly?
>
> *Queen:* I do wonder, doctor,
> Thou ask'st me such a question: have I not been
> Thy pupil long? * * *
> * * * I will try the forces
> Of these thy compounds on such creatures as
> We count not worth the hanging (but none human),
> To try the vigor of them, and apply
> Allayments to their act; and by them gather
> Their several virtues and effects.

The doctor then very properly warns her against such experiments by the laity, speaking of their cruelty and disagreeable nature.

> *Cornelius:* Your highness
> Shall from this practice but make hard your heart;
> Besides, the seeing these effects will be
> Both noisome and infectious.

The Queen replies, "O, content thee;" and as Pisanio enters she says aside:

> Here comes a flattering rascal; upon him
> Will I first work: he's for his master,
> And enemy to my son.

She then dismisses the doctor, who, taking his leave, says to himself:

> I do not like her. She doth think she has
> Strange lingering poisons. I do know her spirit,
> And will not trust one of her malice with
> A drug of such damned nature: Those she has,

Will stupefy and dull the sense awhile—
Which first, perchance, she'll prove on cats and dogs,
Then afterwards up higher; but there is
No danger in what show of death it makes,
More than the locking up the spirits a time,
To be more fresh, reviving. She is fool'd
With a most false effect; and I the truer,
So to be false with her.

—*Cymbeline*, act iv, sc. v.

For a proper understanding of this incident and the character and professional standing of the physician Cornelius, one must read more than I have time to quote. It is understood, of course, that the Queen wishes to be rid of Imogen, a daughter of the King by a former wife. It will, however, be noticed that the Queen did not get the drug she wished for. Now what did she get? Later on in the play, after the Queen's death, we find out more about her attempts at poisoning. She had come into possession of another drug which she had intended for the King, but which it is evident she did not get from Dr. Cornelius, as she confessed about it to him, as he says in speaking to King Cymbeline:

She did confess, she had
For you a mortal mineral; which, being took,
Should by the minute feed on life, and, ling'ring,
By inches waste you.

—*Cymbeline*, act v, sc. v.

Of the drugs known at the time of the play (or rather known to Shakespeare's time, for the time of this play is the reign of Augustus Cæsar, and the characters are sixteenth century Italians), the ones most likely to produce the effects of slow poisoning ending in death would be some of the salts of mercury or antimony. But to continue about the drug with which the Queen intended to make away with Imogen—Cornelius speaks of it again, later on, as follows:

The Queen, sir, very oft importun'd me
To temper poisons for her; still pretending
The satisfaction of her knowledge only
In killing creatures vile, as cats and dogs
Of no esteem; I, dreading that her purpose
Was of more danger, did compound for her
A certain stuff which, being ta'en, would cease
The present power of life, but in a short time
All offices of nature should again
Do their due functions.
[Then to Imogen]—Have you ta'en of it?
Imogen: Most like I did, for I was dead.

—*Cymbeline*, act v, sc. v.

It has been argued that the drug which had such a wonderful effect on Imogen must have been something analogous to chloroform. This theory is based on the assertion that Imogen was "stark and pale" when found, which, as Dr. Portman Chesney says, "would make the identity of the article used, to be chloroform and distinguish it from chloral." Now if the word *stark*, as Shakespeare uses it, means *rigid*, then the drug could not have been chloroform; but whatever it was, it was evidently not a liquid, for it was handed to Imogen in a box by Pisanio, who had it from the Queen, who, it seems, did not try it on him as she had threatened. Of course, neither of the above-mentioned drugs were discovered for many years after Shakespeare's time; but it is well known that the Italian alchemists of the Middle Ages were expert in compounding drugs and poisons, and it is possible that some drug having the effect described may have been known to them and subsequently lost.

Another mention of a drug having the power of producing temporary unconsciousness and obliteration of the senses, is found in *Romeo and Juliet*. It is given to Juliet by Friar Laurence, that she may feign death on the day appointed for her unwilling marriage to Paris. Friar Laurence says to her:

Take thou this phial, being then in bed,
And this distilled liquor drink thou off:
When presently through all thy veins shall run
A cold and drowsy humor, which shall seize
Each vital spirit; for no pulse shall keep
His natural progress, but surcease to beat;
No warmth, no breath, shall testify thou liv'st;
The roses in thy lips and cheeks shall fade
To paly ashes; thy eyes' windows fall,
Like death, when he shuts up the day of life;
Each part, depriv'd of supple government,
Shall, stiff and stark and cold, appear like death;
And in this borrowed likeness of shrunk death
Thou shalt remain full two and forty hours,
And then awake as from a pleasant sleep.

—*Romeo and Juliet*, act iv, sc. i.

The action of this drug seems very similar to that of the drug administered to Imogen. The length of time during which unconsciousness prevailed, as the result of a single dose, would argue against its being any drug known to modern materia medica. The mode of its administration, it being swal-

lowed, would exclude chloroform, even if that drug were known at the time. Chloral hydrate would be impossible, as the effects of anything short of a fatal dose would be more transient.

As we become acquainted with the habits of the good friar, we notice his familiarity with plants and herbs; so it is most likely that his remedies would be chosen from the vegetable kingdom, and opium in some form seems to be about the only thing suggested, yet even this is improbable, even if Shakespeare has lengthened the duration of the effect to suit the plot.

It will be remembered that Juliet was but fourteen years old, and the friar must have known that young persons bear opium badly, but he promises that Juliet "shall awake as from a pleasant sleep." This would hardly be the sequence of a dose of opium large enough to keep a person completely narcotized for "two and forty hours" or even half that time. The probability is that the drugs taken by Imogen and Juliet were both purely imaginary, and that Shakespeare caused them to be used for their dramatic, rather than for their medicinal, effect.

In the third scene of the second act, when Romeo seeks Friar Laurence, he finds him in the woods near his cell, with his basket, gathering "baleful weeds, and precious-juiced flowers." He wisely chooses the early morning as the best time for gathering his herbs, while the dew is on them, and before they have been wilted by the sun. Among the contents of the friar's basket is a plant which he describes thus:

> Within the infant rind of this small flower,
> Poison hath residence, and med'cine power:
> For this, being smelt, with that part cheers each part;
> Being tasted, slays all senses with the heart.
>
> —*Romeo and Juliet*, act ii, sc. iii.

This may have been aconite, the poisonous effect of which is noted in another place.

In this play Shakespeare has given us a look into a "drug store" of the Middle Ages. This apothecary and his shop have long since returned to dust, but his spirit still lives, and his modern prototype, with his patent medicines and his heaven-born genius for curing certain diseases, is not such a *rara avis* as we might wish. Romeo, in despair, is meditating self-destruction; he says:

> I do remember an apothecary—
> And hereabouts he dwells—whom late I noted
> In tatter'd weeds, with overwhelming brows,
> Culling of simples; meagre were his looks;
> Sharp misery had worn him to the bones:
> And in his needy shop a tortoise hung,
> An alligator stuff'd, and other skins
> Of ill-shaped fishes; and about his shelves
> A beggarly account of empty boxes,
> Green earthen pots, bladders, and musty seeds,
> Remnants of packthread, and old cakes of roses,
> Were thinly scatter'd to make up a show.
> Noting this penury, to myself I said—
> An if a man did need a poison now,
> Whose sale is present death in Mantua,
> Here lives a caitiff wretch would sell it him.

Romeo enters this uncanny-looking shop, and, calling the apothecary, says to him directly, and without any of the circumlocution or dissembling commonly practiced by customers on such errands:

> Let me have a dram
> Of poison; such soon-speeding gear
> As will disperse itself through all the veins,
> That the life-weary taker may fall dead;
> And that the trunk may be discharged of breath
> As violently, as hasty powder fired
> Doth hurry from the fatal cannon's womb.
>
> —*Romeo and Juliet*, act v, sc. i.

Now Romeo does not ask for ratsbane or insect-powder, but states his purpose plainly, and the apothecary cautiously answers him:

> Such mortal drugs I have; but Mantua's law
> Is death to any he that utters them.

Romeo argues the case with him, and, his argument being strengthened by the offer of forty ducats, the apothecary finds it irresistible, and says:

> My poverty, but not my will, consents.

Romeo replies:

> I pay thy poverty, and not thy will.

The directions which the apothecary gave to Romeo, and his almost instant death on taking the poison, afford some ground for conjecture as to its nature. The apothecary says:

> Put this in any liquid thing you will,
> And drink it off; and if you had the strength
> Of twenty men, it would dispatch you straight.
>
> —*Romeo and Juliet*, act v, sc. i.

The sudden action of this poison suggests hydrocyanic acid in some form. From the

directions for its use, it would be inferred that it was given to Romeo in the form of a salt or powder to be dissolved, or a concentrated liquid requiring dilution. Cyanide of potassa, as it is now made, was probably not known at that time, but cherry-laurel water and other preparations containing hydrocyanic acid as their active principle undoubtedly were, and would be sufficiently active to cause death in the manner described.

The poison which kills Hamlet's mother was as sudden in its action and effect as that which put an end to Romeo. As she puts the cup to her lips, the King warns her, but she misunderstands him and tastes the poisoned wine. The effect is so sudden that no effort is made to save her, although she is surrounded by attendants. It is, as the King says, "too late" (*Hamlet*, act v, sc. ii).

Here, perhaps, is another suggestion of hydrocyanic acid. The dagger with which Hamlet stabs the King is poisoned; the King dies instantly, but whether from the effect of the poison or the wound, is not known—probably from the latter (*Hamlet*, act v, sc. ii).

The elder Hamlet also died by poison. The ghost gives this account of the manner of separation from the body:

> Sleeping within mine orchard—
> My custom always of the afternoon,—
> Upon my secure hour thy uncle stole,
> With juice of cursed hebenon in a vial,
> And in the porches of mine ear did pour
> The leperous distillment: whose effect
> Holds such an enmity with the blood of man,
> That, swift as quicksilver, it courses through
> The natural gates and alleys of the body:
> * * * * so did it mine;
> And a most instant tetter bark'd about,
> Most lazar-like, with vile and loathsome crust,
> All my smooth body.

The progress of the disease caused by this poison must have been rapid indeed, as he says:

> No reckoning made, but sent to my account
> With all my imperfections on my head.
>
> —*Hamlet*, act i, sc. ii.

The New York Medical Record of Jan. 13, 1883, quoting from the Spectator, says: "The elder Hamlet dies by vegetable poisoning. There is strong reason for thinking that the true reading of the drug is not the usual 'hebenon,' but hebona, or yew-juice, for the symptoms are precisely those caused by this and no other. Whether, in the then state of anatomy, Shakespeare really believed, contrary to the truth, that such a juice poured into the ear would so course through the body, is not so clear. It is probable that he took the old story so far as he needed to do so, but, having made it responsible for the mode in which the foreign element was introduced into Hamlet's frame, used then his own observation and curious plant-lore for the efforts which the body made to cast it out."

This explanation of the cause of the elder Hamlet's death is sufficiently plausible, perhaps, to excuse the liberty taken with the text, for Shakespeare was doubtless aware of the poisonous properties of the yew tree, as he makes it one of the ingredients of the charm which is brewed in the witches' cauldron in *Macbeth:*

> Root of hemlock digg'd i' the dark;
> Liver of blaspheming Jew;
> Gall of goat, and slips of yew,
> Silver'd in the moon's eclipse.
>
> —*Macbeth*, act iv, sc. i.

Many ingenious arguments have been advanced to establish the identity of these and various drugs of which only the effect is mentioned, and in most instances in too indefinite a manner to form the basis of any scientific deductions; perhaps in many instances not even the name of the drug had occurred to Shakespeare. When it suited the purpose of the play to get rid of a man by poison, the poison is made to do its work. When a character has served his purpose and it is necessary to the dramatic effect that he disappear, he never "lags superfluous upon the stage," but a rapid poison, or sudden death from natural causes, ends his career at the most opportune time, as in the case of Romeo and Hamlet's mother and the King. When another appearance or a lingering death is necessary to the full development of the dramatic interest, a slow poison or insidious disease are chosen, and always in a way to give a natural effect to the whole plot—in short, the effect which would be the most logical sequence of a given cause.

Poisoning was a much more usual means of revenge and of getting rid of one's enemies during the Middle Ages than now, and that is why we find it mentioned so often

in the pages of Shakespeare. Poisons were administered in all imaginable ways, many of them very ingenious. The dagger with which Hamlet stabs the King was poisoned, and Laertes in the same play says:

> I'll anoint my sword.
> I bought an unction of a mountebank,
> So mortal, that but dip a knife in it,
> Where it draws blood no cataplasm so rare,
> Collected from all simples that have virtues
> Under the moon, can save the thing from death,
> That is but scratched withal.
>
> —*Hamlet*, act iv, sc. vii.

The concoction of poisons, and their use, were developed into an art during the Middle Ages, notably in Italy in the time of the Borgias. This fact has been noted in *Cymbeline*. Imogen, fearing for the fate of her husband, says, when Pisanio hands her a letter:

> What is in thy mind? * * *
> * * * If it be summer news,
> Smile to't before; if winterly, thou need'st
> But keep that countenance still.—My husband's hand?

[she exclaims on seeing the letter]

> That drug-damn'd Italy hath out-craftied him.
>
> —*Cymbeline*, act iii, sc. iv.

The drug- and plant-lore of Shakespeare is extensive and curious.

We may infer from its frequent mention that the mandrake, its uses and the curious superstition connected with it, must have been familiar to him. It may not be superfluous to say that the mandrake of Shakespeare is not the *Podophyllum peltatum*, or May apple, of the American woods, but an entirely different plant. The *Mandragora officinalis* of Linnæus belongs to the botanical order Solanaceæ. It is indigenous in some of the countries of the Levant and in Syria, Palestine, and Asia Minor. Its lateral branches and forked roots give it an occasional resemblance to the human form. The flowers are white, and the fruit is an orange-colored berry about the size of a nutmeg. Dr. Westcott says that "the ancients laid much stress on the doctrine of correspondences, and argued that this human-like root must have some special attributes as regards man; hence it became used as an amulet or talisman, and ladies valued it as a love philtre."

Mandragora is often mentioned by ancient writers, and has been thought to be identical with the μωριον or "mad root" of the Greeks. It has also been supposed to be the κιρκαία ῥίζα, the root named after the enchantress Circe. Its description in some respects resembles the Homeric μῶλυ, used by Ulysses to break the spell of Circe's enchantment. This root, as described in the *Odyssey*, was black, the plant having a white flower, and, as Homer says, it was hard for mortal man to dig, but the gods are able to to do everything—even to dig the mandrake. The Homeric description of μῶλυ would, as far as it goes, answer almost as well for mandragora; and, if we may trust the descriptions which were current in the Middle Ages, *it* must have been hard for mortal man to dig. The mandrake was supposed to grow best over the remains of an executed criminal, and when it was pulled from the earth for the use of man, shrieks and groans were heard, and those who heard them died or became insane. As the plant was in great demand, and its gathering accompanied with peril, the happy expedient of using a worthless dog to drag up the root was resorted to. The unfortunate dog being attached to the mandrake, his master, having stopped up his ears with pitch to avoid hearing the shrieks, took to his heels, and the dog in his frantic efforts to get away pulled up the mandrake with perfect safety to all parties concerned but himself, and then perished miserably or went mad.

The dire effect of hearing the mandrake groan is mentioned in *King Henry VI*, Part II, act iii, sc. ii. The Duke of Suffolk, after being banished, reviling the King, says:

> Wherefore should I curse?
> Would curses kill, as doth the mandrake's groan,
> I would invent as bitter searching terms,
> As curst, as harsh, and horrible to hear,
> * * * * * * * *
> As lean-faced Envy.

Juliet, before taking the friar's potion, conjures up in her mind the terrors of awaking in the tomb of the Capulets, where, as she says,

For these many hundred years the bones
Of all my buried ancestors are packed;
* * * * * * * *
So early waking,—what with loathsome smells,
And shrieks like mandrakes torn out of the earth,
That living mortals, hearing them, run mad.

—*Romeo and Juliet*, act iv, sc. iii.

And again this effect is noted in *Macbeth*. After the first interview with the witches, who have vanished suddenly, Banquo says to Macbeth:

Were such things here as we do speak about?
Or have we eaten of the insane root,
That takes the reason prisoner?

—*Macbeth*, act i, sc. iii.

Recent investigations have shown that there was some reason for the curious attributes ascribed to this drug. It is distinctly narcotic, produces hysterical excitability—hence its reputation for causing madness—and it appears to be a powerful hypnotic, with some similarity to belladonna in its action. It also has a prompt, decided, and persisteut action as a local anæsthetic. A wine of mandragora was used by the Romans to relieve the suffering of the crucified, and was employed down to the thirteenth century as a surgical anæsthetic. A crystallized alkaloid, called mandragorina, has been separated; the sulphate is a mydriatic and has a narcotic action—it bears a close relation to atropine and hyoscyamine. Among the ancients the plant had a great reputation as an aphrodisiac and was supposed to facilitate pregnancy, and in the Orient it still holds something of its ancient reputation. Iago speaks of its narcotic action when he says:

Not poppy, nor mandragora,
Nor all the drowsy syrups of the world,
Shall ever medicine thee to that sweet sleep
Which thou ow'dst yesterday.

—*Othello*, act iii, sc. iii.

The aphrodisiac as well as narcotic effect was probably sought by the sensual Queen of Egypt. Cleopatra says:

Give me to drink mandragora,
* * * * * * * *
That I might sleep out this great gap of time.
My Antony is away.

Antony and Cleopatra, act i, sc. v.

The use of old remedies is occasionally revived in our own time; nor is the superstition which assisted their marvelous action always lost sight of. The belief that gold possessed some miraculous power over disease is an old one. It is mentioned in *King Henry IV*, Part II, act iv, sc. iv, by Prince Henry in speaking of his father's crown:

Therefore thou, best of gold, art worst of gold;
Other, less fine in carat, is more precious,
Preserving life in med'cine potable.

We are not told its uses or effects, but we can hardly suppose that the bichloride of the metal was used by hypodermatic injection with the idea of destroying a man's taste for whiskey, or to arrest the progress of tuberculosis. It would be interesting to note the effect of the bichloride treatment on Bardolph, Christopher Sly, or the porter of Macbeth's castle.

Shakespeare sometimes makes direct mention of diseases by name as we know them now; and in many instances where he only mentions some of the symptoms or effects, the malady may be easily identified by his description. Syphilis was doubtless more common and virulent in the past than at the present; it is often mentioned. France has long been held responsible for it. In *Pericles*, act iv, sc. iii, the servant Boult says to the bawd:

* * * But, mistress, do you know the French knight?

She answers:

Well, well; as for him, he brought his disease hither.

And again in the same play and act, sc. vi, Lysimachus, entering a brothel, says to the keeper:

* * * How now, unwholesome iniquity?
Have you that a man may deal withal, and defy the surgeon?

Sir John Falstaff, gossiping with his familiars in the tap-room of the Boar's Head tavern, says to Doll Tear-sheet:

If the cook helps to make the gluttony, you help to make the disease, Doll; we catch of you, Doll, we catch of you; grant that, my poor virtue, grant that.

When Timon of Athens speaks his mind to Phrynia and Timandra, he gives rather a startling portrayal of some of the manifestations of syphilis:

Consumptions sow
In hollow bones of man; struke their sharp shins.
And mar men's spurring. Crack the lawyer's voice,
That he may never more false title plead.
* * * * down with the nose,
Down with it flat; take the bridge quite away;
* * * make curled-pate ruffians bald;
And let the unscarr'd braggarts of the war
Derive some pain from you.

—*Timon of Athens*, act iv, sc. iii.

Hamlet asks the grave-digger:

How long will a man lie i' the earth ere he rot?

Clown: Faith, if he be not rotten before he die (as we have many pocky corses now-a-days, that will scarce hold the laying in), he will last you some eight or nine year; a tanner will last you nine year.

—*Hamlet*, act v, sc. i.

Other references to this disease are abundant; in fact, they are more numerous than edifying.

Diseases may sometimes become a personal advantage to those afflicted by them. Falstaff understood this when his finances were at a lower ebb than usual:

I can get no remedy against this consumption of the purse; borrowing only lingers and lingers it out, but the disease is incurable.

A happy thought strikes him at the same time with a twinge of the gout, and he exclaims:

A pox of this gout! or a gout of this pox! for the one or the other plays the rogue with my great toe. It is no matter if I do halt; I have the wars for my color, and my pension shall seem the more reasonable. A good wit will make use of anything; I will turn disease to commodity.

Chlorosis is often noticed. Capulet uses this among other choice expressions applied to his daughter:

Out, you green-sickness carrion! Out, you baggage, you tallow face.

—*Romeo and Juliet*, act iii, sc. v.

As menstrual irregularities are commonly observed with chlorosis, either as cause or effect, this may have prompted Lady Capulet's anxiety for her daughter's early marriage. A vulgar superstition on this subject is noted in *Pericles*, act iv, sc. ii. Falstaff, who was sometimes a wise observer, said:

There's never any of these demure boys come to any proof; for thin drink doth so overcool their blood, and making many fish meals, that they fall into a kind of male green-sickness; and then, when they marry, they get wenches.

—*Henry IV*, Part II, act iv, sc. iii.

The fat knight also makes some observations about apoplexy, but his ætiology seems to be a "little off:"

Falstaff: And I hear, moreover, his highness is fallen into this same whoreson apoplexy.

Chief Justice: Well, Heaven mend him.

Fal.: This apoplexy is, as I take it, a kind of lethargy, an 't please your lordship: a kind of sleeping in the blood, a whoreson tingling. * * * It hath its original from much grief, from study and perturbation of the brain; I have read the cause of his effects in Galen.

Humphrey, Duke of Gloster, meets with sudden death. His post-mortem appearance is thus described by the Earl of Warwick:

See how the blood is settled in his face!
Oft have I seen a timely parted ghost,
Of ashy semblance, meagre, pale and bloodless,
Being all descended to the laboring heart;
Who, in the conflict that it holds with death,
Attracts the same for aidance 'gainst the enemy;
Which with the heart there cools, and ne'er returneth
To blush and beautify the cheek again.
But see, his face is black, and full of blood;
His eye-balls further out than when he liv'd,
Staring full ghastly like a strangled man;
His hair uprear'd; his nostrils stretch'd with struggling;
His hands abroad display'd as one that grasp'd
And tugg'd for life, and was by strength subdu'd.

—*King Henry VI*, Part II, act iii, sc. ii.

Falstaff dies of a malarial fever, or, as Dame Quickly calls it, "a burning quotidian," contracted during his famous military campaign. His age was about sixty—he says "inclining to three-score." This fact, and the convivial habits of his past life, rendered him an easy prey to the disease, but the end was peaceful. Dame Quickly, who was present, said:

'A parted even just between twelve and one, e'en at turning o' the tide: for after I saw him fumble with the sheets, and play with flowers and smile upon his fingers' ends, I knew there was but one way; for his nose was as sharp as a pen, and 'a babbled of green fields.

The power of a fever to subdue the strongest nature is well portrayed by Cassius in his attempt to prejudice Brutus against Cæsar, of whom he says:

He had a fever when he was in Spain,
And, when the fit was on him, I did mark
How he did shake: 'tis true, this god did shake;
His coward lips did from their color fly;
And that same eye, whose bend doth awe the world,
Did lose his lustre. I did hear him groan:
Ay, and that tongue of his, that bade the Romans
Mark him, and write his speeches in their books,
Alas! it cried, Give me some drink, Titinius!
As a sick girl. Ye gods, it doth amaze me,
A man of such a feeble temper should
So get the start of the majestic world,
And bear the palm alone.

—*Julius Cæsar*, act i, sc. ii.

Cæsar was epileptic; Casca describes one of his attacks to Brutus and Cassius:

Cassius: But soft, I pray you: What? Did Cæsar swoon?

Casca: He fell down in the market place, and foamed at mouth and was speechless.

Brutus: 'Tis very like; he hath the falling sickness. * * *

Casca: * * * When he came to himself again, he said, If he had done or said anything amiss, he desired their worships to think it was his infirmity.

—*Julius Cæsar*, act i, sc. ii.

King Henry the Fourth was troubled with insomnia; he thus describes the rest for which he has sought his bed in vain:

How many thousand of my poorest subjects
Are at this hour asleep. Sleep, gentle sleep,
Nature's soft nurse, how have I frighted thee,
That thou no more wilt weigh my eye-lids down
And steep my senses in forgetfulness?
Why, rather, sleep, liest thou in smoky cribs,
Upon uneasy pallets stretching thee,
And hush'd with buzzing night-flies to thy slumber,
Than in the perfumed chambers of the great,
Under the canopies of costly state,
And lull'd with sounds of sweetest melody?
O thou dull god, why liest thou with the vile
In loathsome beds; and leav'st the kingly couch?
* * * * * * * *
Wilt thou upon the high and giddy mast
Seal up the ship-boy's eyes and rock his brains
In cradle of the rude imperious surge?
* * * * * * * *
Canst thou, O partial sleep! give thy repose
To the wet sea-boy in an hour so rude;
And in the calmest and most stillest night,
With all appliances and means to boot,
Deny it to a King? Then, happy low, lie down!
Uneasy lies the head that wears a crown.

—*King Henry IV*, Part II, act iii, sc. i.

We may believe that physical diagnosis was an art not much cultivated in Shakespeare's time. Some hints about urinalysis are all that he gives us. I need hardly say that urinary examination, or "casting the water," as it was called, was, until much later than Shakespeare's time, the merest quackery, and was often practiced by mountebanks and old women.

"Pray God, he be not bewitched?" says Maria, speaking of Malvolio. Fabian answers with this advice:

Carry his water to the wise woman.

—*Twelfth Night*, act iii, sc. iv.

Falstaff probably suspected that sack and sugar were overworking his kidneys, for he says to his little page who has been to the doctor's:

Sirrah, you giant, what says the doctor to my water?

Page: He said, sir, the water itself was a good healthy water; but for the party that owed it, he might have more diseases than he knew for.

—*Henry IV*, Part II, act i, sc. ii.

A very judicious and non-committal answer, which shows that there were wise doctors in those days.

Frequent mention of subjects connected with obstetrics and parturition is met with. Several passages might be quoted to show that fourteen years was commonly thought to be the age of nubility. Capulet and his wife, however, do not agree on this subject; as regards Juliet, he says:

My child is yet a stranger in the world;
She hath not seen the change of fourteen years.
Let two more summers wither in their pride,
Ere we may think her ripe to be a bride.

—*Romeo and Juliet*, act i, sc. ii.

Lady Capulet says:

Tell me, daughter Juliet,
How stands your disposition to be married?
Juliet: It is an honor that I dream not of.
Lady Capulet: Well, think of marriage now; younger than you,
Here in Verona, ladies of esteem
Are made already mothers; by my count
I was your mother much upon these years
That you are now a maid.

—*Romeo and Juliet*, act i, sc. iii.

The fact that children develop and reach maturity at an earlier age in southern countries, is too well known to require comment.

An interesting psychological problem is found in the belief, which had long been held, that the mental state of the parents at the time of conception influenced to a certain extent the mental and bodily vigor of the child; hence the opinion that natural or "love children" were more vigorous. This, as well as the influence of pre-natal impressions on the mother, has been noted. Edmund, the natural son of the Earl of Gloster, refers to the former in his soliloquy:

> Thou, Nature, art my goddess; to thy law
> My services are bound: wherefore should I
> Stand in the plague of custom, and permit
> The curiosity of nations to deprive me
> For that I am some twelve or fourteen moonshines
> Lag of a brother? Why bastard? Wherefore base?
> When my dimensions are as well compact,
> My mind as generous, and my shape as true,
> As honest madam's issue? Why brand they us
> With base? with baseness?—Bastardy? base, base?—
> Who, in the lusty stealth of nature, take
> More composition and fierce quality
> Than doth within a dull, stale, tired bed
> Go to the creating a whole tribe of fops,
> Got 'tween asleep and wake?
>
> —*King Lear*, act i, sc. ii.

The well known importance to pregnant women of avoiding excitement, worry, fear, anger, or any of the disturbing mental emotions, on account of their influence on the unborn child, is well portrayed by Elizabeth, wife of Edward IV, who on receiving bad news of her husband, who has been taken prisoner, says:

> Fair hope must hinder life's decay,
> And I the rather wean me from despair,
> For love of Edward's offspring in my womb:
> This is it that makes me bridle passion
> And bear with mildness my misfortunes cross:
> Ay, ay, for this I draw in many a tear,
> And stop the rising of blood-sucking sighs,
> Lest with my sighs or tears I blast or drown
> King Edward's fruit, true heir to the English crown.
>
> —*Henry VI*, Part III, act iv, sc. iv.

Thaisa being taken in labor on board ship at sea, Pericles thus invokes the goddess who was supposed to lend her aid on such occasions:

> Lucina, O
> Divinest patroness and midwife's gentle
> To those that cry by night, make swift the pangs
> Of my Queen's travails.
>
> —*Pericles, Prince of Tyre*, act iii, sc. i.

Premature birth, and the difficult labor sometimes caused by the birth of deformed children or monsters, are noted, especially in the play of *Richard III*, who thus speaks of himself:

> For I have often heard my mother say
> I came into the world with my legs forward;
> Had I not reason, think ye, to make haste
> And seek their ruin that usurp'd our right?
> The midwife wonder'd; and the women cried,
> O Jesus bless us, he is born with teeth!
> And so I was, which plainly signified
> That I should snarl and bite and play the dog.
>
> —*King Henry VI*, Part III, act v, sc. vi.

The Duchess of York, mother of Richard, reproaching him for his crimes, says:

> A grievous burden was thy birth to me.
>
> —*King Richard III*, act iv, sc. iv.

And again, Richard, speaking of himself, says:

> I, that am curtail'd of this fair proportion,
> Cheated of feature by dissembling Nature,
> Deform'd, unfinish'd, *sent before my time*
> *Into this breathing world, scarce half made up*,
> And that so lamely and unfashionably
> The dogs bark at me as I halt by them.
>
> —*King Richard III*, act i, sc. i.

Some topics of medico-legal interest are suggested. Under the old English law, adultery was punished by death. King Lear in his madness imagines he is dispensing justice:

> I pardon that man's life! What was thy cause?
> Adultery. Thou shalt not die. Die for adultery! No:
> The wren goes to't, and the small gilded fly
> Does lecher in my sight.—
> Let copulation thrive,
> * * * * for Gloster's bastard son
> Was kinder to his father, than my daughters,
> Got 'tween the lawful sheets.
>
> —*King Lear*, act iv, sc. vi.

The remembrance of the wrongs he has suffered at the hands of his ungrateful daughters is enough to temper the old King's justice with mercy.

Under the laws of England, pregnancy may be successfully pleaded in mitigation of

punishment, by women convicted of crime. The famous Osborne pearl case in England, and the case of Mrs. Montague who was tried in Ireland for the death of one of her children, are recent instances where this law has been invoked.

In *King Henry VI*, Joan La Pucelle, better known as Joan of Arc, is represented as invoking the protection of this law in pleading for her life with the Earl of Warwick and Duke of York:

> *La Pucelle:* Will nothing turn your unrelenting hearts?
> Then, Joan, discover thine infirmity,
> That warranteth by law to be thy privilege:
> I am with child, ye bloody homicides.
> Murder not then the fruit within my womb,
> Although ye hale me to a violent death.
>
> —*King Henry V*, act v, sc. iv.

The length of the period of gestation sometimes becomes a question of great medico-legal importance, especially in monarchical countries, where the right of primogeniture and entail of property obtain. Several references to this may be found.

> *Duke of Gloster:* My princely father then had wars in France,
> And, by just computation of the time,
> Found that the issue was not his begot.
>
> —*Richard III*, act iii, sc. v.

Another mention, this from *King John:*

> *Robert Falconbridge:* I shame to speak:
> But truth is truth. Large lengths of seas and shores
> Between my father and my mother lay
> (As I have heard my father speak himself)
> When this same lusty gentleman was got.
> Upon his death-bed he by will bequeath'd
> His lands to me; and took it on his death
> That this, my mother's son, was none of his—
> And if he were, he came into the world
> Full fourteen weeks before the course of time.
>
> —*King John*, act i, sc. i.

The statements of both Gloster and Falconbridge are prompted by shameless attempts at fraud—as will be seen on reading the plays. Falconbridge, however, gets little satisfaction from his exposure of family secrets; his scheme to defraud his brother is checkmated by King John, who says:

> Sirrah, your brother is legitimate;
> Your father's wife did after wedlock bear him.
>
> —*King John*, act i, sc. i.

In reading Shakespeare we are often reminded that there is "nothing new under the sun." At least one abdominal section seems to have been done in Scotland centuries before Mr. Keith had become famous. When, in the closing scene, Macbeth meets Macduff to try the last argument of battle, encouraged by the prophecy of the witches, he says:

> Thou losest labor;
> As easy may'st thou the intrenchant air
> With thy keen sword impress, as make me bleed.
> Let fall thy blade on vulnerable crests:
> I bear a charmed life, which must not yield
> To one of woman born.

Macduff answers him:

> Despair thy charm;
> And let the angel, whom thou still hast serv'd,
> Tell thee, Macduff was from his mother's womb
> Untimely ripp'd.
>
> —*Macbeth*, act. v, sc. vii.

The name of Battey's operation belongs to modern surgery. The operation itself, however, had been thought of long ago, and it may well be questioned whether the reasons for its performance have always been more justifiable in modern times than those of Antigonus, who threatened to make his daughters suffer for the suspected unfaithfulness of his wife. He says:

> If this prove true, they'll pay for't: by mine honor,
> I'll geld them all; fourteen they shall not see,
> To bring false generations.
>
> —*Winter's Tale*, act ii, sc. i.

In the above quotation we have another mention of the supposed age of nubility.

The influence of mental impressions on the body is well illustrated in the saying of Leontes:

> Alack, for lesser knowledge! How accurs'd
> In being so blest! There may be in the cup
> A spider steep'd, and one may drink, depart,
> And yet partake no venom; for his knowledge
> Is not infected; but if one present
> The abhorr'd ingredient to his eye, make known
> How he hath drank, he cracks his gorge, his sides,
> With violent hefts.
>
> —*Winter's Tale*, act ii, sc. i.

Physical conditions simulating actual disease (and sometimes resulting in it) are often caused by mental emotions, and they are

often more troublesome than actual disease because more difficult of diagnosis and incurable by pharmaceutical therapeutics. Oberon says of Helena:

> All fancy-sick she is, and pale of cheer,
> With sighs of love, that cost the fresh blood dear.
>
> —*Midsummer Night's Dream*, act iii, sc. ii.

It is well known that severe mental tension of any kind taxes the bodily powers quite as severely as physical hardship.

The difficulty of making a diagnosis in diseases which are the effect of mental causes which the patient will not reveal, is strongly portrayed in the case of Lady Macbeth. Her malady was the direct effect of the mental disturbances caused by remorse for the murder of Duncan. For obvious reasons she could not confess the cause, and she was strong enough even in her distress to know that the doctor could not help her even if she did. His ignorance of the truth puts the doctor at a disadvantage. The somnambulism of his patient, of which he has been a witness, puts him on his guard and arouses suspicions of some horrible origin of her trouble; as he says:

> Foul whisperings are abroad; unnatural deeds
> Do breed unnatural troubles. Infected minds
> To their deaf pillows will discharge their secrets.
> * * * * Look after her;
> Remove from her the means of all annoyance,
> And still keep eyes on her.
>
> —*Macbeth*, act v, sc. ii.

He could scarcely have given better advice had he known all; and could he have spoken more wisely or honestly than when he said:

> This disease is beyond my practice.
>
> —*Macbeth*, act v, sc. i.

Macbeth knew the cause of his wife's trouble, and was himself suffering from remorse for the crime in which he had shared her guilt. In their last extremity he seeks the physician's aid for his wife, with the same superstitious hope that makes him trust the saying of the witches:

> Fear not, Macbeth; no man that's born of woman
> Shall e'er have power on thee.
>
> —*Macbeth*, act v, sc. ii.

He summons the physician more for the good he *may* do than for any he really expects. He may hope, but how can he believe? His own strong mind is bending under the strain; as the end draws near, he asks:

> How does your patient, doctor?
> *Doctor:* Not so sick, my lord,
> As she is troubled with thick-coming fancies,
> That keep her from her rest.
> *Macbeth:* Cure her of that.
> Canst thou not minister to a mind diseas'd;
> Pluck from the memory a rooted sorrow;
> Raze out the written troubles of the brain;
> And, with some sweet oblivious antidote,
> Cleanse the stuff'd bosom of that perilous stuff
> Which weighs upon the heart?

Macbeth shows the common unreasoning confidence in the power of drugs when he asks for "some sweet oblivious antidote." His confidence is shaken by the honest reply of the doctor, who frankly confesses that he knows of none when he says:

> Therein the patient
> Must minister to herself.

To which Macbeth, forgetting in his excitement the impossibilities he has asked, returns the impatient, but under the circumstances very natural, answer:

> Throw physic to the dogs; I'll none of it.
>
> —*Macbeth*, act v, sc. iii.

Lady Macbeth's physician shows himself a gentleman and a worthy member of his profession. In his day the standard of professional acquirements was low, as compared with to-day. Quackery was quite as prevalent, and perhaps even more resorted to than now. Under the circumstances, I cannot help thinking that this physician acquitted himself with credit to his profession. He certainly forms an agreeable contrast to the quack described in the *Comedy of Errors*, who was brought to examine into the mental condition of Antipholus:

> They brought one Pinch; a hungry, lean-faced villain,
> A mere anatomy, a mountebank,
> A threadbare juggler and a fortune-teller,
> A needy, hollow-ey'd, sharp-looking wretch,
> A living dead man; this pernicious slave,
> Forsooth, took on him as a conjurer,
> And, gazing in mine eyes, feeling my pulse,
> And with no face, as 'twere, out-facing me,
> Cried out, I was possessed.
>
> —*Comedy of Errors*, act v, sc. i.

Cornelius, whom I have mentioned before, was undoubtedly a man of creditable standing in his profession; and so also was the physician who attended King Lear.

Some writers on the subject have, I think, made a mistake in including Cerimon among Shakespeare's physicians. There is nothing to show that he was a qualified medical man. He is described as a "lord of Ephesus." At best he seems to have been a clever amateur, a scholar who dabbled in physic. He is of a philanthropic disposition; has some learning, if we take his word for it, and much self-conceit. What he says of himself would almost be sufficient to stamp him as a quack, in spite of his self-alleged learning:

'Tis known I ever
Have studied physic, through which secret art,
By turning o'er authorities, I have
(Together with my practice) made familiar
To me and to my aid, the blest infusions
That dwell in vegetives, in metals, in stones;
And I can speak of the disturbances
That Nature works, and of her cures; which gives me
A more content in course of true delight
Than to be thirsty after tottering honor,
Or tie my treasure up in silken bags
To please the fool and death.

—*Pericles, Prince of Tyre*, act iii, sc. i.

Helena, daughter of Gerard de Narbon, a physician, on her father's death comes into possession of many receipts, with which she begins practice on her own account—one of which, "the dearest issue of his practice" as she calls it, she proposes to try on the King of France, who is suffering from a fistula. The King is properly conservative and somewhat skeptical; what he says might be read now-a-days with advantage by many people who are inclined to run after such innovations as "Christian science" and the like. That diseases are sometimes cured by novel and unusual means, does not prove that they are always the most reliable. The King says:

We thank you, maiden,
But may not be so credulous of cure
When our most learned doctors leave us, and
The congregated college have concluded
That laboring art can never ransom nature
From her inaidable estate.—I say we must not
So strain our judgment, or corrupt our hope,
To prostitute our past-cure malady
To empirics; or to dissever so
Our great self and our credit, to esteem
A senseless help, when help past sense we deem.

—*All's Well that Ends Well*, act ii, sc. i.

Whatever Helena's skill may have been, her conduct in securing a patient was not such as could truthfully be called strictly professional; but she finally persuades the King to place himself under her treatment, when she proves the efficacy of the "dearest issue" of her father's practice, by curing her patient, whom the "congregated college" had concluded was a hopeless case.

One of the most remarkable incidents of this case is Dr. Helena's demand of her fee. She modestly says:

Then shalt thou give me, with thy kingly hand,
What husband in thy power I will command;
Exempted be from me the arrogance
To choose from forth the royal blood of France.

—*All's Well that Ends Well*, act ii, sc. i.

The saying of King Cymbeline to Cornelius on his announcing the death of the Queen, is worth remembering:

Whom worse than a physician
Would this report become? But I consider
By med'cine life may be prolonged, yet death
Will seize the doctor too.

—*Cymbeline*, act v, sc. v.

HÆMORRHOIDS.*

BY W. C. HEGGIE, M.D.

Hæmorrhoids have been of much trouble to humanity, and also a source of much pecuniary benefit to quacks. It is not my intention to go extensively into the subject, but rather to glance over it and give you the benefit of my experience, which has been rather large in this one branch of surgery.

By hæmorrhoids, or piles, we mean a morbid condition of the hæmorrhoidal veins of the anus or lower rectum, in the subcutaneous or submucous tissue, giving rise to inflammatory swelling and hypertrophy.

Piles are usually divided into two classes, according as they are within the rectum or *internal*, or at the verge of the anus or *external*.

The causes of piles are predisposing as well as exciting.

*A paper read before the Wayne County Medical Society, Nov. 17, 1892.

The great predisposing cause is the peculiar arrangement of the venous system of the rectum. You must, to understand the nature of piles, remember that between the muco-cutaneous coat of this part and the muscular coat lies a layer of loose areolar tissue within which is interlaced a net of winding veins. This network of veins is constantly carrying the blood towards the vena portæ, and a much smaller portion towards the internal iliac vein. In this large plexus of veins, there is a tendency to stagnation of the blood—on account of the dependency of the part, and the absence of valves in the superior hæmorrhoidal vein and vena portæ, which enables the whole of the venous portal circulation to be pressed back on its support. One can easily see how this would cause distension of the weaker veins; and were it not that the middle hæmorrhoidal vein is connected with the systemic circulation by means of the internal iliac vein, thus acting as a safety-valve, piles would undoubtedly be more frequent than they are.

The veins, being situated in the tissue between the tense muscular coat on the one side and the mucous coat on the other, naturally dilate towards the mucous or weaker side; hence the weakness of this coat is a source of trouble.

Piles are found in both sexes and at all ages after fifteen years, not commonly before.

A sedentary life, want of exercise, life in hot climates, sitting on cold seats, excesses in eating and drinking, and masturbation, are all predisposing causes of piles.

The exciting causes are:

1. Local irritation.
2. Habitual use of drastic purgatives.
3. Proximity of disease of uterus or genito-urinary system.
4. Other diseases of rectum, *e.g.*, ulcer, etc.
5. Prevention of the blood circulating freely through the portal system, as by constipation, congestion of liver, pressure of gravid uterus, or tumor.

Let us look at the structure of a pile. It must of necessity begin by a varicose condition of the veins. This varicose condition, if not relieved, becomes greater, and, inflammation setting in, the coats of the vein as well as the loose areolar tissue surrounding it becomes hypertrophied, thus forming the tumor called a hemorrhoid. I have seen cases in which there were no distinct tumors, but merely a general irritation and swelling, caused apparently by a varicose condition of the plexus of veins and areolar infiltration. In those cases, I fancy, piles would have been formed had not the cause been removed; and could we see the beginning of every case of hemorrhoids, we would see that varicosity of the veins only.

External piles are covered with the cutaneous or muco-cutaneous tissue of the anus, and are quite distinct rounded or longitudinal tumors in the stage of congestion. When not congested, an external pile may appear nothing more than a cutaneous fold.

The symptoms of external piles are: Pain during defecation, tenusmus, and ocularly the appearance of a livid mass which, if large or inflamed, occasions great distress. The pain is often very severe, shooting to the testicle and in other directions.

Of internal piles, or those situated entirely within the rectum, there are two varieties: (1) The fleshy or longitudinal, situated one or two inches up the rectum; it is tough, elastic, and spongy, of a copper-brown tint, and tapers from a broad base; it is not a bleeding pile. (2) The globular or bleeding pile; this generally has a pedicle, and hangs down into the rectum; it is of a bluish-black color, streaked with reddish lines. These lines are arteries in the mucous tissue investing the pile proper.

The symptoms of internal piles are heat, itching of anus, a feeling as if a foreign body were in the gut, bearing down after stool, and perhaps prolapsus. Irritation of neighboring organs may come on, as pain in the testicles, frequent micturition, and sometimes the symptoms of coxalgia; these all may be produced, but they subside when the piles are removed. Hæmorrhage is a prominent symptom, varying in degree from a few drops to ounces or even pints. The hæmorrhage is usually a relief to the patient, but if long continued is a source of danger to health, causing anæmia, etc. In cirrhosis of the liver, in a corpulent person, the hæmorrhage is regarded as a safety-valve. In color the blood is usually florid, coming from the arte-

ries of the mucous membrane, and not, as a rule, from the pile itself.

Hæmorrhoids may subside, coagulate, be absorbed, or suppuration may set in and destroy them.

The diagnosis of piles is generally easy, but sometimes it is difficult to distinguish them from prolapsus, which indeed is generally present to some degree.

Treatment.— In the treatment of hæmorrhoids it has been the mistake of many surgeons to look on them as merely a local disease requiring only surgical treatment. That surgeon will have most success who has due regard to the cause of the trouble, and first sets about *its* removal before resorting to operative measures.

In many cases the removal of the cause will itself cause a cure. We will therefore divide the treatment into three general divisions: (1) Constitutional, (2) local, (3) operative.

As regards constitutional treatment, in no two cases can one lay down the same method. In anæmic patients, direct a generous diet with mild tonics, and keep the bowels regular. In plethoric cases, reduce the diet, avoid all stimulants, and see that the bowels are free. In *all* cases remember this rule: See that the intestines are open.

Patients will come and tell you that their bowels are open and regular, and no doubt they fancy they are telling the truth, because they have a passage daily. Do not allow this to deceive you into the belief that there is no fæcal obstruction. There may be, and very often is, a mass of fæcal matter in the rectum or adjacent intestine, the removal of which will cause a subsidence of the disease. If there is *any* obstruction, remove it.

During the last five years it has been my plan of procedure in all cases to give an enema of warm water to wash out the bowel. Soon after the bowel has been evacuated, another injection—of about a quart of hot water—is given, and the patient directed to lie quiet and retain it as long as possible. By hot water I mean water as hot as can be borne with comfort. This acts as a poultice to the rectum and surrounding parts, and is useful in uterine troubles should the patient be a female. Massage to the abdomen is of benefit in chronic constipation.

The most common medicines in use for this trouble, and the most useful to keep the intestines free, are: Senna, cascara sagrada, sulphur, castor oil, taraxacum, podophyllin, and small doses of aloes in conjunction with any of the others. Drastic purgatives are contra-indicated.

Local Treatment.—Wash the pile in cold or hot water, as is most beneficial in each case. If the piles are new, the application of astringent ointments or suppositories is of benefit.

If a pile becomes inflamed, order the patient to lie down and rest, and apply poultices to or leeches around the pile.

In many cases you will find contraction of the anus. I have found this to be the case so frequently in connection with piles that now my plan is always to dilate the sphincter forcibly, and always with good results.

Operative Treatment.—In all cases, before operating, be sure your patient has not cirrhosis of the liver. If that condition exists, you should never operate. In external piles, after getting away with any inflammation that may be present, I wash out the rectum, then, grasping the pile with a tenaculum or forceps, cut it off at the base with a pair of scissors, preferably a pair curved on the flat. At the same time I am careful to remove all redundant tissue in the neighborhood. There has never been any severe hæmorrhage after operating in any of my cases. After removing all the tumors and superfluous tissue, dress the part with an ointment composed of cocaine, boric acid, and vaselin. (The formula is: 4 grains of cocaine, 40 grains of boric acid, 1 ounce of vaselin.) Then introduce a morphine suppository within the rectum, apply some lint, and direct the patient to lie quiet for a few hours. The next day he feels able for his usual business.

In internal piles the ligature is an old and safe method. You first wash out the bowel, then direct the patient to cause the piles to be protruded, when you give him an anæsthetic. Grasp the pile with a pair of ring forceps, and, if the base of the pile is broad, cut a groove for the ligature with your scissors; then apply your ligature tightly. Proceed thus with each pile. When all are attended to, administer a morphia suppository, and keep the patient in bed for six or seven

days, when you will find the piles all gone, leaving an ulcerated surface which will soon heal. The objection to this treatment is the pain following the operation until the ligature separates.

In my fourth case, after ligating, it struck me as a good plan to cut off the pile, leaving the ligature attached to the base or pedicle. This plan was attended with good results, the ligature preventing any hæmorrhage. The patient had very little inconvenience in going about. The bowels were moved on the third day, and on examination I found a slight ulcer where the pile had been. Being satisfied with the method, I used it on several following cases until the clamp treatment occurred to me. I would now advise all to operate in the following manner:

Prepare your patient as in the procedure of ligating; then administer the ether. Introduce your speculum and grasp the base of the pile firmly in a clamp; then with your scissors cut it off close to the clamp. Now take the cautery at a dull red heat and cauterize the stump thoroughly. Loosen the clamp gradually, and, if there be any bleeding, close it and again apply the cautery. When on opening the clamp there is no bleeding, remove the clamp. Proceed thus with each pile until all are removed. Introduce a suppository as in the other cases, and your patient is able to go about. Paquelin's thermo-cautery is preferable, but if you do not have one the actual cautery answers the same purpose.

The advantage of the clamp-cautery treatment is that there is very little or no after-pain. You remove the trouble at once, and the patient goes about his usual business the next day.

The injection treatment was extensively advocated for some time, but it has not been nearly so successful as the clamp treatment. Too strong injections were given, and death sometimes resulted. If you wish to use this treatment, or if the patient will have no other, then the best injection I know of is a 5-per-cent. solution of carbolic acid in glycerin and water. Inject a few drops of this solution well within the pile, and the solution will do the rest. Never inject an external pile.

Detroit, Mich.

Correspondence.

WAYNE COUNTY MEDICAL SOCIETY.

Regular meeting held Nov. 17th, the President, O. S. Armstrong, M.D., in the chair.

Dr. W. C. Heggie read a paper on Hæmorrhoids (see page 753).

DISCUSSION.

Dr. R. H. Honner: I think the ligature much better than the clamp, as it is impossible for us all to carry around with us a cautery and clamp.

Dr. Samuel Bell: In internal hæmorrhoids we have arterial blood, as this would come more direct from the heart, through the iliac arteries. External hæmorrhoids are due to some malcondition of the liver.

Dr. R. Murphy: Gives aloes, mandrake, etc., unless contra-indicated. Likes the ligature, as it is safe and easily applied.

Dr. Thomas Henderson: Would give some treatment that would suit the case, as the different individual cases present themselves.

Dr. A. Stewart: Has not had the best results from the remedies laid down in the text-books or recommended in the different magazines. Iodine and glycerin has been the best, on self. Iodoform has been very grateful as an anodyne, with no toxic effect.

Dr. O. S. Armstrong: Thinks the most potent cause of piles is constipation. In external hæmorrhoids, cuts them off, and has had troublesome hæmorrhage once or twice. For internal, gives several quarts of quite hot water, per rectum. Likes dilation for external piles. Believes that any remedy that will evacuate the bowels will help the trouble.

Dr. E. B. Smith: In snipping off an external pile, care should be taken not to take off too much, as this would cause delay in healing and a disagreeable contraction. In internal piles, when they are called venous, capillary, and arterial, there is a condition from the different inflammatory stages of a new growth of connective tissue or embryological tissue.

Dr. O. S. Armstrong: Has Dr. Smith seen any cases where more tissue has been removed in extirpating external piles than was necessary.

Dr. Smith: Yes; have a case that I'm now treating.

Dr. O. S. Armstrong: Would like to ask the Doctor if he means that the tissue is a new one?

Dr. E. B. Smith: It would be, as the condition of the venulæ would favor this, through the inflammatory exudation.

Dr. C. Henri Leonard: Agreed with Dr. Smith. Illustrated and explained the two words hypertrophy and hyperplasia; also pointed out what he thought a close relation, or the same condition, known as areolar hyperplasia of uterus, and also referred to hyperplasia of lymphatic glands.

Dr. Thos. Henderson reported a case of hydrocephalus in the new born, where the tumor was situated a little below the posterior fontanelle and ruptured at birth; transfixed the parts by ligatures. Child doing well, now several days old.

E. B. SMITH, M.D.,
Secretary.

AN ELYSIUM FOR THE VETERANS.

It occurs to me to suggest a prescription for such of my *confrères* as are, like myself, nearing the three-score-year mile-stone. It is this: Look well to the collections, and with the first five or ten hundred of surplus buy five or ten acres of land in Southern California, preferably San Diego county, the Palestine of this continent, with 15,000 square miles of territory, and with climates suited to perennial agriculture.

Within a radius of even six or eight miles from this city irrigable tracts may be purchased at from $20 to $150 per acre, which in four years' time would yield quite a revenue. There are companies and individuals who will sell these sites for cash or on the installment plan, and will plant them to anything the purchaser may prefer. Lemons are quite the fad now, one company having devoted 1,000 acres of their holding to that citrous fruit. The lemon is almost indigenous to the coast region, and begins to bear in two years. Meanwhile vegetables, guavas, berries, in fact *something*, can be grown every day in the year! One crippled rancher, five months ago, sold seventeen tons of apricots from less than two acres of ground, and less than eight years from beginning cultivation.

As a New Year's offering I shall be glad to place anyone so desiring in communication with reliable parties, who will furnish all the details as to cost, etc. C. M. FENN, M.D.

San Diego, Cal., Dec. 15, 1892.

The Medical Age.

A SEMI-MONTHLY REVIEW OF MEDICINE.

B. W. PALMER, A. M., M. D., Editor.

—PUBLISHED BY—

GEO. S. DAVIS, Medical Publisher, Box 470.

DETROIT, MICH., DEC. 27, 1892.

Editorial.

WHAT WILL THE HARVEST BE?

The year has gone, and with it many a glorious throng of happy dreams. The specifics for pulmonary consumption, for cholera, for yellow fever, for rabies, for rheumatism, and for not a few other maladies, are yet to be discovered. Not a little work has been accomplished, however, in advancing standards of knowledge concerning the cause and treatment of disease.

Among the workers, the bacteriologists have been perhaps the most active. They have shown through experiments on animals that the injection of a drop of blood from an immune frog will protect a mouse against an anthrax inoculation; that the blood of animals immune against tetanus and diphtheria injected into susceptible animals prevents fatal infection from cultures of the bacilli of these diseases; that the blood or serum of animals artificially immune against croupous pneumonia renders susceptible animals immune, and that it has a direct curative effect if injected after the development of the disease.

One may be encouraged to hope if not believe, in view of the activity of research, that the cause and remedy for many diseases now unamenable to treatment may be developed before the twentieth century.

THE AGE hopes to keep its readers informed of all the latest discoveries and modern methods of prevention or medication that are reported in our own and foreign medical, pharmacal, and chemical literature, and would esteem more frequent communications from its readers concerning the interesting cases in their daily practice.

Much yet remains to be done, and let us work and hope that 1893 will be a year when

medicine will be made still more of a science than an art.

THE PRESERVATION OF LIFE IN MALARIOUS COUNTRIES.

This subject is considered in the recent work by Professor Tommasi-Crudeli entitled "The Climate of Rome and the Roman Campagna." The eminence of the authority makes this author's views of special interest.

We must be content to admit that for the present we have no precise knowledge of the nature of the malarious poison or of the means whereby it can be extirpated from the soil of an infected locality. That the poison inheres in the soil; that it is greatly under the influence of season, temperature, and rainfall; that it is excited to fresh activity by all measures involving the disturbance of earth long left quiescent; that its ravages have been much reduced by drainage, by the conversion of naked soil into meadow land, and by the erection of houses and laying down of paved streets—these facts are certain, and almost exhaust our knowledge on the subject.

Professor Tommasi-Crudeli points out that the traditional precautionary measures long adopted in malarious countries have had two ends in view, viz., to reduce as much as possible the quantity of the malaria ferment which enters into the system through the air breathed; and to prevent a lengthened abode of the same in the system. The first point is sought to be achieved by avoiding agricultural operations during those hours at which the malarious influence is most potent, viz., about sunrise and sunset; hence, according to the writer, is really explained the much misunderstood dictum of the ancient Sybarites: "If you wish to live long and well, never see the rising or the setting sun." Another point of the greatest importance is to avoid breathing the air in close contact with the soil, as it can be shown that the malarious poison rises only a short distance in a vertical direction. In Greece, the jungles of the East Indies, and Central and Southern America, similar devices have been adopted with beneficial results. Another mode of eluding the malaria-laden air in close contact with the ground is to construct the dwellings in such a way that when the door is shut the internal atmosphere is renewed only by the strata of the local atmosphere which are near the roofs of the houses. This is managed in some localities by so arranging that the only opening in the outer walls is the door, and all the windows open on an inner yard at a higher level than the ground floor of the house. It is advisable also to keep the windows of the houses closed in the morning and during the early hours of the evening, especially if any excavations should be going on in the neighborhood. Care should be exercised regarding the effects of placing vases of flowers in occupied rooms; either these should be entirely excluded from houses when malaria is rife, or the utmost vigilance should be taken to secure thorough ventilation.

The above measures all aim at minimizing or preventing the reception of the malarious poison into the system. Other measures are directed to preventing the germs, already absorbed, from remaining in the human body for any length of time. These measures, according to Professor Tommasi-Crudeli, all resolve themselves into expedients for maintaining in an active and regular condition the circulation of the blood. Everything that tends to keep the secretions healthy and active promotes the elimination of the malarious poison and reduces the probability of its effecting destructive changes in the body. The principal indications are to maintain constitutional vigor by good nourishment, the moderate use of wines and spirits, and to avoid all disturbance of the system from variations of temperature. Hence warm clothing, even in the hot season, is indispensable.

The difficulties regarding the above preventive measures are the time, expense, self-restraint, and inconvenience involved in carrying them out. Acclimatization comes to our aid; not, however, acclimatization of the individual, but of the race. "This power of constitutional resistance has been proved to be hereditary, and the repeated selections caused by malaria in each generation have conduced to the eventual increase of the resisting powers of the race, and that to such a degree as to enable it to found powerful colonies in unhealthy sites, such as in Italy were those of Selinunte, Agrigentum, Sibaris, Pæstum, and Rome."

The chief remedies that have been used to combat malaria are quinine, arsenic, eucalyptus, salicylates, the fruit of the lemon, etc. The good effects of quinine are, of course, unquestionable. Its anti-malarious influence is, according to Professor Tommasi-Crudeli, rapid but fugitive. Quinine is, unfortunately, rather expensive and tends after a time to disturb the digestive organs and the nervous system. Arsenic the writer regards as a remedy of the very highest value, especially as a prophylactic. He has instituted extensive experiments among the properties of the land-owners of Tuscany, Rome, Puglia, and Sicily, and among the workers on the Roman and southern railways with encouraging results. Dr. Ricchi, the chief medical officer of the southern railways, experimented in the year 1883 upon seventy-eight persons in the district of Bovino, where malaria is very virulent. He divided them into two categories, one of which only was subjected to the preventive treatment by means of arsenic. The result was that the great majority of those who took no arsenic (we are not told the precise number) had violent attacks of fever, while of those subjected to the arsenical treatment thirty-six escaped entirely and the remaining three had only slight attacks. Other experiments were not less satisfactory, and some cases of failure were attributed to the arsenic having been administered in a non-assimilable form. Professor Tommasi-Crudeli has no faith at all in the alleged anti-malarious influence of the salicylates, and attaches hardly any greater value to the use of eucalyptus. He also disputes the alleged beneficial results said to have attended the planting of eucalyptus trees in malarious regions.

The net result of Professor Tommasi-Crudeli's experience would seem to be that hygienic and dietetic measures are of the greatest importance in dealing with malaria, that arsenic has a true prophylactic influence, and that quinine and a decoction of lemons are the most valuable remedies during the actual attack.

A NATIONAL HEALTH DEPARTMENT.

This question has been very generally agitated and discussed by both the medical and newspaper press, and the trend of opinion is decidedly in favor of a National Health Department, with a cabinet officer appointed by the President.

The advisory body of physicians appointed by the special committee of the New York Chamber of Commerce to consider the administration of quarantine at that port has reported that the present health officer, Dr. Jenkins, has not shown sufficient executive ability or knowledge of sanitary science to warrant the belief that he can in future manage quarantine affairs in a satisfactory and safe manner.

The committee itself, consisting of Messrs. A. E. Orr, Seth Low, S. D. Babcock, J. Pierpont Morgan, Austin Corbin, in their report to the Chamber of Commerce state that they are clear that the recent quarantine experience of New York points with singular emphasis to the importance of a national quarantine. They sum up the arguments in its favor, as drawn from this experience, as follows:

The Federal Government being an indispensable factor in every quarantine crisis, it is only by giving to the Federal Government complete control that conflicts of authority and the weakening effects of official jealousy can be avoided.

The Federal Government, in every crisis, through the various arms of the public service, is able to command an amount of expert coöperation entirely beyond the reach of a State department.

The Federal Government has at command the trained men who have to be summoned to the help of the State in time of peril. It is better to have the Federal Government directly responsible, instead of indirectly.

To these may be added the further consideration that the coöperation of Consuls with the quarantine officials is a matter of growing importance. The health officer complains that he failed to receive the aid from this quarter to which he was entitled. It is clear that these officers would be less likely to be at fault as toward Federal officials.

An international supervision of infectious diseases is a probable and a very desirable outcome of recent experiences. Such an outcome of itself would necessitate a national quarantine.

Book Notices.

THE CHRISTMAS (DECEMBER) HOME-MAKER MAGAZINE.

The Christmas Home-Maker Magazine surpasses in size, in interesting reading-matter, and in beautiful pictures, many of the publications that are vying with each other during this holiday time to attract the attention of the great public. The frontispiece is a magnificent colored head of the late poet laureate of England. An article on Tennyson is illustrated with views of his birth place, his various beautiful country homes throughout England, and many of his favorite haunts. Douglas Sladen furnishes an account of "A Visit to the Tiffanys of Japan," with pictures of the many rare things to be found there. Jenny June's "Notes of a Short Trip Abroad" bring us to the Falls of the Rhine and the Lake of the Four Cantons, with many dainty views of the picturesque country. Marion C. Smith contributes an excellent Christmas story, and Alice King Livingston shows us in the beautiful illustrations of her Colorado story, "The Cave of the Winds," that America is richer in beautiful scenery and natural wonders than the Old World. There is an interesting account of a visit to the "Home of Samuel Edison," the fathor of the great inventor, and a sketch of the mother of the great Adams family—Abigail Smith Adams. The two continued stories, "The Fall of Jason," by Willis George Emerson, and "Up-Hill," by Emma D. Connelly—continue to interest and delight the readers of The Home-Maker. Nor are the departments neglected. "The Housewife" gives all sorts of charming Christmas receipts. "Decorative Home-Art" tells us how to delight our friends with dainty gifts; and all the others follow in their usual order, completing a magazine that none can surpass and few equal.

The price of The Home-Maker is 20 cents a copy, $2.00 a year. The Home-Maker Company, 36 Union Square, New York.

"A YARD OF SWEET CLOVER."

The publishers of that elegant monthly household magazine Food have just published a companion to "A Yard of Roses" and "A Yard of Pansies," two floral pieces that have recently been issued.

"A Yard of Sweet Clover" is a frieze 5¼ by 36 inches, representing a gracefully blended collection of clover blossoms. This beautiful floral piece is given away to every subscriber of Food at the regular subscription price of $1.00 per year, or it will be sent with the exquisite Christmas number for 25c.

The Christmas Food is a splendid contribution to current holiday literature. Among the contributions in this number are a pretty illustrated Christmas story by Arthur C. Grissow, entitled "The Curate's Cake;" "The Olive Tree and Its Fruit" (illustrated), by John A. Paine, Ph.D., Curator, Metropolitan Museum of Art; "Christmas Garnishings" (illustrated), by Albert Hardy, of Godey's Magazine; "Long Island Food Hunters," (illustrated), by Davis A. Curtis; "Decorations for Yuletide" (illustrated), by Mary Preston Adams; "A Chapter on Wedding Cakes" (illustrated), by Helen Combes; "Christmas Confections," by Lina Dalton. These, with beautiful full-page illustrations, and articles of special interest in connection with practical housekeeping, make up a magazine of rare attractiveness. Food is taking a foremost place among the standard magazines of the day, and its recent reduction in price from $2.00 to $1.00 places it within the reach of everyone who has a taste for the good things in literature. Published by The Clover Publishing Company, 71–73 Park Place, New York City.

CONTENTS OF SCRIBNER'S MAGAZINE FOR JANUARY.

The Muse Urania. Frontispiece. From a fresco attributed to Lo Spagna; engraved by T. A. Butler.

The Peary Relief Expedition. By Angelo Heilprin, Chief of the expedition. Illustrations by F. W. Stokes, who accompanied the expedition for Scribner's Magazine, and W. L. Metcalf; engraving by Peckwell, Witte, C. I. Butler, and E. H. Del'Orme.

Sonnets After the Italian. By John Hall Ingham.

Personal Recollections of Mr. Lincoln. By the Marquis de Chambrun.

The Poor in Naples. By Jessie White Va. Mario. [The seventh article in the series on "The Poor in Great Cities."] Illustrations by Ettore Tito; engraving by E. H.

Del'Orme, C. I. Butler, Pettit, Van Ness, Leblanc, and J. Clément.

An Old Love-Letter. By Margaret Crosby.

The One I Knew the Best of All: A Memory of the Mind of a Child. By Frances Hodgson Burnett. Chapters I–IV.

Impressions of a Decorator in Rome—first paper. By Frederic Crowninshield. Illustrations by A. Bassi, and from photographs; engraving by T. A. Butler, George Del'Orme, J. Clément, and Leblanc.

Experience. By Edith Wharton.

The Wanderings of Cochití. By Charles F. Lummis. Illustrations from the author's photographs by Irving R. Wiles and Victor Pérard; engraving by E. H. Del'Orme.

Los Caraqueños. By F. J. Stimson. With a full-page drawing by W. L. Metcalf.

Historic Moments: The Fall of Sebastopol. By William Howard Russell, LL.D.

The Point of View: The Historical Novel—Jokes by Acclamation—The Sonnet of Arvers.

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Bulletin of American Academy of Medicine. December, 1892. Published bi-monthly at the office of the Secretary, Lafayette College, Easton, Pa. Subscription price, $3.00.

The papers of the Academy of Medicine as published in its Bulletin treat largely of the proper education of the physician, including his preparatory training, and are of value to every one interested in the present-day educational problems, and to those contemplating the study of medicine. In like manner the discussion of similar topics is of interest to the Fellows of the Academy and of value for its library.

The Academy will very gladly exchange with any periodical, or with the publications of any scientific or literary society or institution.

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Lippincott's for January, 1893.

The contents of Lippincott's for January show that it is keeping up its reputation for a bright, entertaining periodical.

Its adoption of illustrations adds new charm to it. Four of its contributions in the January number are thus adorned.

Its contents are: "A Pacific Encounter," by Mary E. Stickney; "A Spanish Painter," by Colin Campbell Cooper; "Humility," by Ina Lillian Peterson; "An Old-time Philadelphian," by Elizabeth Ballister Bates; "Gypsies and the Poet," by W. L. Shoemaker; "In War Time," by M. E. W. Sherwood; "Across Dug Gap," by S. L. Bacon; "An Actress and Her Art," by Alfred Stoddard; "Bringing Home the Cows," by Charles G. D. Roberts; "Foils and Fencing," by Eugene Van Schaick; "Sweetheart, to You," by William H. Hayne; "If I Might Choose," by Carrie Blake Morgan; "A Dictionary Lesson at the Academy," by F. H. Machuning; "Men of the Day," by M. Crofton; "Gossip of the Century," by W. S. Walsh; "Recent American Fiction," by Anne H. Wharton.

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The Home Magazine.

This entertaining magazine begins its sixth volume with January, 1893. It is published monthly by the Brodix Publishing Co., 614 Eleventh street, Washington, D. C., and its subscription price is 50 cents a year.

Under the editorial management of Mrs. John A. Logan, this sprightly periodical gathers a galaxy of interesting literature each month, well adapted for home reading.

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Pee-exam. Quiz in Materia Medica and Therapeutics. Published annually among the students in the Medical Department of Harvard University.

This publication is used by students in preparing for examinations. The number for 1893, just issued, contains 18 pages.

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Here are two books issued and announced by W. B. Saunders, of Philadelphia:

The "American Text-Book of Surgery," edited by Professors Keen and White, of Philadelphia, which has only been issued a few months, is already a phenomenal success. It has been adopted as a "text-book" by forty-nine of our leading medical colleges and universities. Nearly five thousand copies have been placed in physicians' libraries, and every indication points to a sale of at least as many copies more in the next six months.

Dr. Nicholas Senn, of Chicago, is now preparing a "Syllabus of Lectures on the Practice of Surgery" arranged in conformity with the "American Text-Book of Surgery," which will be a valuable aid to all who have this great book.

Notes and News.

The Origin of Hæmoglobin.—

We look to comparative physiology and histology for much of our information on the origin of the blood-corpuscles, and quite recently considerable light has been shed on the subject by the researches carried on in both the phylogenetic and ontogenetic relations of these corpuscles. In the Transactions of the Canadian Institute for 1891, Dr. A. B. Macallum deals with the question of the origin of hæmoglobin of the fusiform corpuscles and of the hæmatoblasts in the blood of amphibia. Working with lake lizards (*Necturus lateralis*) and the larvæ of *Amblystoma punctatum*, and examining the blood fresh, or fixed either in the fumes of osmic acid—1-per-cent. solution for two hours—or by a saturated solution of corrosive sublimate or picric acid, or by Ehrlich's fluid (the only fixing reagents which he found serviceable), and staining with the various color reagents usually recommended, he obtained most beautiful preparations, as a result of the study of which he concludes that the hæmoglobin of the blood-corpuscles is derived from the abundant nuclear chromatin of the hæmatoblasts. This chromatin, he considers, is an iron compound, the constant oxidation and reduction of which constitutes the chemical process underlying life. The fusiform cells of amphibian blood, he maintains, are derived from the blood-corpuscles—that they are in fact the remains of the broken up or destroyed red cells, the latter in this conversion losing the cell membrane and the greater portion of the discoplasma. The hæmatoblasts in amblystoma are probably the direct descendants of cells split off from the extreme ventral portions of the visceral mesoblast. Of course the most interesting part of the paper is that dealing with the origin of the hæmoglobin and with the iron in this compound. The importance of the use of freshly prepared ammonium sulphide in aiding in the solution of this question can from Dr. Macallum's evidence scarcely be over-estimated.—*London Lancet.*

A Paper Hospital.—

A description of a portable paper hospital is given by the editor of the Popular Science Monthly in connection with an article by M. Emmanuel Ratoin. Its entire dimensions are 16 by 5 metres, and it will accommodate twenty beds. Folded up, it forms a load for three 2-horse trucks. When it is to be set up, the three trucks, the length of which is equal to the width of the building, are brought up so as to be parallel in line and a few metres distant from one another, and are arranged so that their floors, which are to form a part of the floor of the building, shall be on a level. Light T-shaped joists of iron are stretched across the intervals, supported by trestles when necessary, to receive the paper panels completing the floor. The element of the construction is a panel, usually 3 metres by 1 metre and 60 centimetres, and a tubular beam 10 centimetres in thickness and composed of two walls of pressed paper 4 millimetres in thickness, fixed upon a frame likewise of paper. The pieces composing this frame are V- or U-shaped. The panels are easily handled, and they fit at their edges so as to constitute a wall. The roof is composed of similar panels fastened in pairs. The two parallel walls are connected by a number of tie-beams composed of thin wire of galvanized iron. The floor is also composed of paper panels about a metre and a half square. By means of double walls, inclosing a cushion of air, such a building will well resist variations of temperature outside. The interior of the building is without visible framework and without posts. The building is closely jointed and might be varnished, making it easy to wash and disinfect. The windows are of wire gauze covered with a transparent coating. Ventilation is obtained through holes bored at the angle between the ceiling and the walls.—*Boston Medical and Surgical Journal.*

The Specialist and the General Practitioner.—

Dr. William Warren Potter contributed a paper on this topic at the meeting of the Southern Gynæcological Association. His views are:

There is essential need for specialists. Divisions of labor in every field are demanded, and nowhere more than in medicine.

Specialists being a necessity, they must equip themselves by years of study, and de-

vote themselves to a still greater number of years of general practice, before they are justified in offering themselves as specialists.

They must conduct themselves in such a way as to merit the respect of the general practitioner, and to invite his co-operation in their work.

The unwritten ethics of specialism demand that there shall be reciprocal relationship maintained, not only among specialists themselves, but also between specialists and general practitioners.

The opportunities for perfection in special lines of medical study are so great, and medical literature in both journalistic and text-book form is so rich, that an awful responsibility is entailed.

The schools ought to discourage any and all students who give promise of entering upon the practice of a specialty as soon as the college doors are passed and before the swaddling-clothes of the professional tyro are slipped.

Music as a Remedy.—

The connection between music and medicine was discussed by Dr. J. G. Blackman at a recent meeting of the Portsmouth Literary and Scientific Society. The physiological foundation of musical therapeutics was examined and described as consisting in the power exercised by harmony over the vasomotor function. Most will acquiesce in this view, which is also corroborated by the experiments of Riegel on the blood-pressure and heart action during the performance of music. It follows naturally that the ailments most likely to be benefited by this means are those in which nervous disorder plays a leading part. A number of cases illustrating this point were quoted at the meeting referred to, and we should probably include among these one in which reduction of temperature followed the administration of "a dose" of melody. The violin takes high rank as a vehicle having the soothing property, and the other instruments best adapted to the treatment of disease by musical sounds were, in the lecturer's opinion, the harp and the pianette (not the piano), with which a few well-chosen voices might be advantageously combined. Dr. Blackman does not consider it feasible as yet to apply the musical method as above described in private practice, though he looks forward to its employment in hospital work.

Tobacco as a Protective from Cholera.—

The Hygienic Institute of the University of Berlin has published the following conclusions, after repeated experiments made with relation to the spread of the cholera germ through cigars and tobacco:

The comma bacilli of cholera Asiatica die through drying up on dried tobacco leaves even quicker than through drying up on glass, and in this condition they die in an hour on the average. On moist tobacco leaves the comma bacilli do not increase, and are killed after a short time. The comma bacilli were not proved to exist in the examples of cigars manufactured in Hamburg during the prevalence of the epidemic. Through the fermenting and drying processes which cigars must undergo before they are ready for shipment, the cholera bacilli are killed after a short time, even when packed by way of experiment in the linen bands about the cigars. Tobacco smoke checks the development of cholera bacilli and is quickly fatal.

The Code of Ethics, Constitution, and By-laws of the American Medical Association.—

The Committee of Revision, of which Dr. A. M. Holton, of Brattleboro, Vermont, is chairman, is anxious to obtain as much of an expression of sentiment in relation thereto as possible; to that end correspondence is solicited from all who are interested in this subject, in order to enable the committee to frame such a revision as will represent the opinions of the majority of the members of the Association. Such correspondence may be addressed to either member of the committee: A. M. Holton, Brattleboro, Vermont; Leartus Connor, Detroit, Mich.; H. D. Didama, Syracuse, New York; Daniel T. Nelson, Chicago, Ill.; and Benjamin Lee, Philadelphia, Pa.

A New Site and Building for the New York College of Pharmacy.

The New York College of Pharmacy, located since 1879 on East Twenty-third street, which has for some time past been contem-

plating a move uptown, has now secured a plot of ground 75 by 100 feet, on Sixty-eighth street, between Columbus avenue and the Boulevard, and will erect a handsome and commodious building upon it. The architect's plans have been accepted, and it is expected that the new quarters will be ready for occupancy next autumn. There are now 150 members in the senior class and 207 in the junior, and accommodations will be provided for over 400 students in the new building. The cost of the latter, including the purchase of the site, is estimated at $150,000, and the present building and site are valued at $125,000.

The Alkaloids of Cod-liver Oil.—

According to M. Bouillot, the alkaloids of cod liver oil, given in quantities of from 2 to 3½ grains during the twenty-four hours, have a distinct diuretic action, increasing not only the quantity of urine, but that of urea. As had previously been stated by MM. Gautier and Mourgues, who studied their effects on animals, M. Bouillot found that they cause a marked increase in intra-organic oxidation, the oxidation of the leucomaines being rendered nearly complete and the toxicity of these bodies being diminished. It therefore appears to him that the alkaloids of cod-liver oil are likely to be of considerable value in therapeutics.—*London Lancet.*

A New Substitute for Cocaine.—

The acetamide of eugenol—which is contained in oil of cloves—has recently been prepared; it occurs in crystalline form, and appears to enjoy the property of producing local anæsthesia in a very high degree. It may be used similarly to cocaine for this purpose, and, as it has no caustic action and is an energetic antiseptic, it may be found to be even superior to cocaine for minor operations on the mucous membranes.

Distribution of Female Physicians.—

The New York Record states that: Female physicians are scarce everywhere except in the United States. There are only 70 in London, 5 in Edinburgh, 2 in Dublin, 35 in Paris, 1 in Algiers, and 2,000 in the United States.

Therapeutic Brevities.

Dietetic Treatment of Obesity.—Tower Smith, in the Edinburgh Medical Journal, October, 1892, suggests the following diet for an extreme case:

First Period, Fourteen Days.—Breakfast: Tea or coffee, with saccharin if desired in lieu of sugar; bread or biscuits made from soya bean, 2 oz.; grilled whitefish or red meat, kidneys. Lunch: Cut from joint of beef or mutton, taking no fat, and one helping of green vegetables, avoiding only peas, beans, and all roots; soya bread or biscuit, 1 oz. Dinner: Clear soup; whitefish, red meat, green vegetables, as at lunch; soya bread or biscuit, 1 oz.—Drink: First thing on waking, tumbler of hot water with slice of lemon; 11 A.M., cup of bovril or clear soup; lunch, two glasses of claret or 1 oz. of whiskey with potash water; 5 P.M., cup of bovril or clear soup; dinner, two glasses of still hock or claret, or whiskey or potash; bedtime, cup of bovril or clear soup. Mustard, pepper, salt, Harvey's sauce, may be taken.

Second Period, Twenty-one Days.—Additions to No. 1: Oysters, tongue, stewed fruit, with saccharin; poultry, game.

Third Period, Thirty-one Days.—Additions to No. 2: Toast in place of soya bread, for each meal, 2 oz.; savory jellies, aspic of prawns, plovers' eggs, jelly. Dessert: A small quantity of fruit; blue-mould Dorset cheese.

The Salicylates in Pleurisy.—The salicylic treatment of pleurisy, which was first recommended by Aufrecht nine or ten years ago, has recently found considerable favor amongst Swedish physicians, Professor Edgren having employed it in the Serafim Hospital in Stockholm, and Dr. Koster in the Sahlgren Hospital in Gothenberg with great success. In cases where the effusion is quite recent, salicylate of soda given in divided doses of from forty-five to sixty grains per diem is stated to cause rapid absorption, so that aspiration is not required, or if practiced a portion only of the fluid need be removed. The pyrexia disappears simultaneously with the fluid. When other serous membranes, as the pericardium or the peritoneum, become affected, the salicylate acts in an equally beneficial manner on them in causing the absorption of the effusion. In certain of Professor Edgren's cases, it is true, the drug failed to produce any marked effect either on the effusion or on the temperature, but it is not unlikely that in these

cases the pleurisy was really secondary and of tubercular origin, though in other cases of undoubted tubercular pleurisy the salicylate was by no means without effect.—*London Lancet.*

Picrotoxin in the Night Sweats of Phthisis.—Dr. d'Amore has published his experience with picrotoxin and atropine in the night sweats of phthisis. He gives the picrotoxin in granules containing $\frac{1}{160}$ of a grain each. The author reports forty-five cases thus treated. In fifteen advanced cases he gave without success two pills of atropine containing $\frac{1}{65}$ of a grain each, daily; in these cases, two to four granules of picrotoxin, continued for several days, relieved the condition very much. In twenty cases, with less pronounced lesions, atropine did well in some and failed in others; but picrotoxin, used for several days, checked the sweating completely. Finally, in ten early cases, the results were equally good from the use of either drug. The writer explains these differences by the cause of the sweating in the several stages of the disorder. In the early stages much of the sweating is due to the action of the secretory nerves, and these are controlled by atropine; later, the sweating is due more to paralysis of the vaso-motors, and as atropine does not act upon these it loses its power, while picrotoxin, which does act upon the vaso-motor system, retains its value in the advanced stage.—*Les Nouveaux Remèdes.*

A New Alkaloid in Jurubèba.—Dr. Domingos Freire (Sur un Alcaloïde et deux Principes Résinoïdes Extraits de la Jurubèbe. Rio Janeiro: Imprimerie de Pinheiro & Co., 1890) describes an alkaloid and two resinoid principles obtained from the jurubèba or *Solanum paniculatum.* The alkaloid, the method of preparation of which he gives—jurubébine—in the form of a hydrochlorate when injected in very minute quantities into a small bird produced marked tetaniform convulsions, preceded, however, by a semi-lethargic condition in which there was contracture of the extremities; these convulsions ended in death. Of the resinoid substances obtained, jupébebine has an extremely purgative action, whilst the second, jupébin, a resin soluble in potassium hydrate, is non-active. Dr. Domingos Freire considers that the poisonous alkaloid is found especially in the leaves of the plant, and that, like strychnia, it exaggerates or stimulates the excito-motor action of the cord. The purgative resin obtained from this same plant he looks upon as probably analogous to podophyllin.—*London Lancet.*

The Induction of Labor Pains by Intra-uterine Injections of Glycerin.—Pelzer (Archiv für Gynækologie, band. xlii, heft 2) advocates the injection of glycerin between the fœtal membranes and the uterine wall, considering it a safe and efficient means of stimulating uterine contractions. This he does with a syringe and a catheter, carefully avoiding the injection of air or the rupture of the membranes, after placing the patient in the knee-elbow or semi-prone position. One and one-half to one and three-quarters ounces will be required. Pelzer has used this agent in five cases for the induction of premature labor. In four of the cases labor pains were experienced within an hour and the patients were easily delivered; in one of the cases the membranes were ruptured during the injection, thus vitiating the evidence. The author has also satisfactorily used the expedient to stimulate the uterine action when the pains, during labor, had become feeble.

A Simple Method of Promoting the Healing of Wounds in Bones.—Emil Senger, in the Centralblatt für Chirurgie, No. 32, 1892, p. 652, describes his method of treating wounds of the bones in which the periosteum has been lost. It is as follows: The wound is to be treated antiseptically with moist dressings for a few days; then with a chisel the external table, or at least a part of it, is to be chiseled off so as to expose the blood-vessels beneath. A moist dressing being again applied, in a few days granulations begin to spout up, and in a few more will have spread all over the exposed area. Naturally, this procedure is not to be attempted in progressive phlegmonous troubles.

Administration of Enemata.—Rectal feeding may be carried on by means of a mixture of 2 eggs, 20 grains of pepsin, 10 grains of chloride of sodium, and 6 ounces of water (Detroit Emergency Hospital Report). This mixture should be slightly warmed, thoroughly agitated, and then gently introduced into the bowels by means of a syringe. To facilitate the entrance of the fluid into the intestines, it is well to put the patient in a position with the hips much elevated above the head; either the knee-chest position, or with two or three pillows resting beneath the hips.

Medical Progress.

THE TREATMENT OF TYPHOID FEVER.—The treatment of typhoid fever at the Philadelphia University Hospital is as follows:

1. Milk diet.

2. Absolute rest in bed; enforced use of bed-pan and urinal. Disinfection of stools with chloride of lime.

3. Tub bath whenever temperature reaches 102½°.

Rules for bathing:

(*a*) When temperature of patient is below 101°, temperature observation to be made every three hours; when above 101°, every hour; when 102°, every half-hour.

(*b*) Temperature of bath, 70°.

Tub is wheeled aside the bed, and patient lifted in by two nurses, one holding the patient under the arms, the other by the legs.

(*c*) Systematic rubbing is kept up during the bath, and afterwards if the patient shivers much.

(*d*) Water (temp. 50°) is poured over head and shoulders at the beginning of the bath.

(*e*) If desirable, a hot drink, such as hot milk or milk punch, may be given the patient during the bath. If temperature is difficult to reduce, a glass of ice-water may be given instead.

(*f*) Patient remains in bath from fifteen to eighteen minutes.

If temperature tends to remain high, cold cloths or an ice-cap are applied to the head.

Above is the detail of the bath treatment used here. No medicines are given constantly. The vast majority of cases require whiskey in greater or less quantities.

Indications are treated as they arise. Our rule is to keep patient in bed and upon milk diet, for one week after the temperature reaches normal.

In regard to the prevalence of typhoid fever since Sept. 1st, and the locality of the residences of the patients, I would state that we have had ten cases of it in the University Hospital since the above-mentioned date, and that six of these have resided in West Philadelphia within a radius of one mile of the hospital.

The cases have been for the most part uncomplicated, and our death rate has been *nil*.

In one case a relapse occurred on the thirty-first day, after an apyretic period of seven days. This occurred despite the fact that the patient occupied still the dorsal decubitus, and was still on a milk diet.

The treatment pursued at this hospital is the Brand treatment. Whenever the temperature of the patient reaches 102⅘° he is plunged into a tub of water (temperature of 70°) and allowed to remain for fifteen minutes. The effect of the baths on the temperature of different patients varies. Some drop immediately to normal or thereabouts, while others require a repetition of the baths to keep the temperature below 102⅘°. In none of the bath cases was there observed any delirium whatsoever.—Jay F. Schamberg, M.D., Resident Physician, University Hospital, in *Times and Register*, Dec. 24, 1892.

THE "PERFECTED" URETHROSCOPE.—In spite of the great advances made by the introduction of the incandescent electric lamp as the source of illumination, the modern urethroscope still possesses several decided disadvantages. It is heavy, somewhat complicated in construction, and expensive. To overcome these objections I have devised an instrument on an entirely different principle from that of former urethroscopes, using a lens as a condenser instead of the reflected light from a concave mirror.

This instrument consists of a metal tube or cylinder one inch and a quarter in length by one-half inch in diameter, closed at one end. One-quarter of an inch from the open end of this tube is a piano-convex lens, so arranged that it may be easily removed for cleaning. On the inferior surface near the closed end of the tube an elbow is let in, one-quarter of an inch in length and one-half inch in diameter, through which the source of illumination (a small incandescent electric lamp) is introduced, a row of holes being bored at its base to allow of ventilation. The handle of the instrument consists of a piece of hard rubber, one inch long by one-half inch wide, the electrical connections running through it to the lamp which is placed on top. This handle fits into the elbow by means of a bayonet joint, bringing the lamp immediately behind the plane side of the lens. A thumb-screw "switch" in the handle places the lamp under control so that it may be turned on or off at pleasure.

The instrument is attached to the urethroscopic tube by means of a stout wire one inch and a half in length, with hinged joints at each end, which swing in opposite directions and are furnished with set-screws, thus allowing the instrument to be put in any position, though when once adjusted it will rarely be necessary to change it. If the ordinary urethroscope tube is used, the distal

end is provided with a simple ring-sliding joint; but as I greatly favor the use of the tube devised by Dr. Hermann G. Klotz, I have adapted the instrument to this form of tube by placing at the distal end a small flat foot, at the outer extremity of which is a smooth pin. This pin fits into a hole in the tube plate, and on revolving the instrument a quarter-circle the foot swings under a shoulder riveted to the plate, and is securely fastened. This joint is firm and easy of manipulation, readily allowing the illuminator to be attached or removed at any time during the examination.

When the instrumeut is in position and the lamp illuminated, a strong beam of light is thrown directly down the urethroscopic tube, and the urethral mucous membrane is more easily and clearly observed than with any other form of urethroscope with which I am familiar.

The advantages of this instrument are: (1) The exclusion of all extraneous light—the presence of which is a most annoying fault both in the urethroscope of Leiter and in my own improvement on it; (2) a very much more ready access to the urethral field, both to the eye and for instrumental applications; (3) increased illumination; (4) by abandoning the funnel and sliding joint, one inch and a half in distance is gained from the source of illumination to the distal end of the urethroscopic tube, increasing the illumination, and allowing the eye to be placed just so much nearer the mucous membrane to be examined; (5) its extreme compactness and lightness, weighing less than one onnce, even when constructed of brass; (6) its great simplicity of construction, which should insure a moderate cost.—William K. Otis, M.D., in *British Medical Journal*, Dec. 3, 1892.

Bed-Clothing for the Sick.—In hospital as well as in private practice, great errors are made in the matter of bed-clothing for the sick, and particularly for the sick who are suffering from febrile affections. We have got rid of the heavy curtains around the bed; of that grand accumulator of dust and other uncleanliness, the tester; of the heavy valance which converted the under part of the bed into a close cupboard, in which all kinds of unwholesome and cumbrous articles lay concealed, including sometimes excreted matter itself; and we have banished the carpet, which often, as a hard-trodden, dust-laden rag, made the floor beneath the bed persistently impure. This is all good reform, but we have still not advanced sufficiently in the reforms necessary for bed and bedding. The old feather beds, flock mattresses, heavy blankets, thick, impermeable, and dense counterpanes, still encumber many a patient, rendering ventilation of his body as impossible as in the days of our fathers. It does not indeed seem as yet to have been accepted by physicians, still less by nurses and patients, that the body calls for ventilation; that a bed-room or ward may be the purest in a general point of view, and yet that the advantage which ought to arise may be considerably curtailed by the unwholesomeness of the bed and bedding, and by the patient making an unwholesome atmosphere for himself in his immediate surroundings. The universal improvement that is now called for in the direction named consists in substituting porosity for density in all articles of bedding. The thick dense bed and mattress require to be replaced by the light steel elastic bed; and the clothing under and upon the patient, now so close and heavy, require to be replaced by clothing that is porous, so that it can be permeated with pure air from without, and can at the same time permit the warm and impure air from the patient to have free exit. Under such a condition of clothing there is a double current of gases going on in the clothes, which is most purifying, cooling, and refreshing; the noxious odors which so easily accumulate under dense bed-clothes have then no abiding place; and febrile heat is dispersed instead of being retained as an addition to the evil that already exists.

The mistake now so generally made lies in the idea that the warmth which the bed calls for is best obtained by close material and close packing. The error is positive. There is nothing that retains warmth in so good and equable a manner as common air at rest. Dense materials, as Count Rumford demonstrated, cannot keep the body respirably warm. If they are non-conductors they may retain the heat, but then they retain also the cutaneous transpiration; whilst air, a splendid non-conductor, permits the freest diffusion of cutaneous emanations. Materials therefore both for the bed and for the bed-clothing ought to be porous to a free mechanical extent of porosity. The rule holds good for the clothing of the body in health; in sickness it is imperative.—*Asclepiad*, No. 35, 1892.

Nurses for Cholera.—We observe with much satisfaction that active steps are being taken to prepare for a possible visitation of cholera next year. One of the greatest difficulties which will have to be met is to find

a sufficient supply of competent nurses to take charge of the sick in any locality in which the disease may appear. The duty of making the necessary provision will be imposed on sanitary authorities, but we anticipate that it will be no easy task to meet the demands which will be made upon them. The forethought of Her Royal Highness Princess Christian in bringing together representatives of the Royal British Nurses' Association and the Society of Medical Officers of Health is therefore much to be commended. On Monday the late Lord Mayor, Sir David Evans, presided at the Mansion House over a meeting of this Association and the Council of the Society of Medical Officers of Health, at which Her Royal Highness was present. The meeting was well attended, among those present being Sir Joseph Fayrer, Sir Dyce Duckworth, Dr. Thorne Thorne, C.B., Dr. Bezly Thorne, Mr. Shirley Murphy (President of the Society), Dr. Heron, Dr. Armstrong, and Dr. Sedgwick Saunders. Dr. Thorne Thorne explained the duties which would devolve upon sanitary authorities, and Dr. Bezly Thorne gave an account of the steps which it was proposed should be taken by the Nurses' Association. It was arranged that a roll of nurses should be at once opened which should contain the names of all who were willing to serve, so that sanitary authorities should have immediately at their disposal a staff of trained women ready to undertake this important duty. We trust that this invitation will meet with a cordial response, and that many nurses will be willing to render this public service. The Lord Mayor undertook to communicate with the mayors and provosts of other towns, and every effort will be made by medical officers of health to make this movement known throughout all parts of the country. We sincerely wish it every success. The public has every reason to be grateful to her Royal Highness for this timely and valuable suggestion.—*London Lancet*, Nov. 12, 1892.

Transfusion of Blood in Poisoning by Coal Gas.—About twenty years ago transfusion of blood was warmly recommended, especially in certain cases of anæmia and after inhalation of coal gas. The treatment then fell gradually into some disrepute, but is still occasionally recommended as offering a good chance of recovery. Of fifteen cases of inhalation of gas, collected by Landois in the year 1874, six terminated favorably, eight ended fatally, and one case remained doubtful, after the transfusion. Some authors also recommend transfusion of a solution of common salt in place of blood, while others dispute the permanent effect of the salt and give the preference to transfusion of blood. Dr. Siegmund Löwenthal publishes in the Medicinisches Centralblatt a case from Professor Drasche's wards in the Imperial General Hospital at Vienna. A medical man, 80 years old, had inhaled coal gas during a whole night, and was found the next morning in a state of coma, evidently due to poisoning by carbonic oxide. Attempts at resuscitation by artificial respiration and by applying galvanism to the phrenic nerve were unsuccessful, and the patient was then brought to the hospital. Here camphorated ether was first injected, and then a hypodermatic injection of a solution of common salt was made into the abdominal and gluteal regions, but without any good result. Dr. Jahoda then ordered a transfusion of blood taken from the son of the patient, but no improvement was visible. Coma continued, and in two days the patient died. At the post-mortem examination cerebral atrophy was found, with softening centres in both lenticular nuclei and also on the anterior peduncle of the internal capsule. Numerous lobular and puriform centres of a pneumonic character were observed in the lungs, and the kidneys were atrophied. According to the cases published by Klebs, Simon, Ziemssen, and Pölchen, the appearance of the brain described by Dr. Löwenthal is characteristic of death from the inhalation of coal gas. The centres of softening in the large cerebral ganglia, chiefly observed in the middle and inner portions of the lenticular nucleus, are due to fatty degeneration of the afferent vessels and the consequent considerable contraction of their lumen. It is noteworthy that in the case related above the transfusion of blood did not meet with even temporary success. The probable reason why all attempts at resuscitation failed was the patient's advanced age and the consequent want of elasticity in the blood-vessels. Dr. Löwenthal believes that the transfusion of blood in any case cannot have much effect in counteracting the poison of coal gas, as it does not change a sufficient quantity of the co-hæmoglobin into hæmoglobin itself, and the quantity of poison removed by the mechanical process is too small to be of much service. Transfusion of a solution of common salt is preferable, which, though increasing the quantity of liquids in the organism, also causes a considerable increase in the quantity of urine secreted. A necessary condition for a successful issue is a healthy state of the brain.—*London Lancet*, Nov. 12, 1892.